DOCUMENT RESUME

ED 179 535 SP 015 186

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TITLE Tennesse Technological University Teacher Evaluation Model--Year VI. Study of the Teacher Preparation Programs of Tennessee Technological University. Report 79-2.
INSTITUTION Tennessee Technological Univ., Cookeville. Coll. of Education.
PUB DATE Aug 79
NOTE 76p.; Tables 6-7 marginally legible

EDRS PRICE MF01/PC04 Plus Postage.
DESCRIPTORS Effective Teaching; Followup Studies; *Longitudinal Studies; *Program Effectiveness; *Program Evaluation; Relevance (Education); *Research Methodology; Research Tools; *Teacher Education
IDENTIFIERS Tennessee Technological University

ABSTRACT

This report summarizes the sixth year of a longitudinal study of the graduates of the Tennessee Technological University's teacher education program. The procedures and methodology of the research model developed by the University are explained, and data for 1978 graduates are presented, analyzed, and compared with data from all first-year graduates from 1974-1977. A comparison of two select groups of teachers across a five-year period, based on principal evaluation, student evaluation, and observational techniques, is presented. Normative information pertinent to the findings of this in-progress research is discussed. An appendix of reports and studies related to the University's teacher education programs is included. (LH)

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STUDY OF THE TEACHER PREPARATION PROGRAMS OF TENNESSEE TECHNOLOGICAL UNIVERSITY

REPORT 79-2

TENNESSEE TECHNOLOGICAL UNIVERSITY TEACHER EVALUATION MODEL-YEAR VI

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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August, 1979

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ABSTRACT

TENNESSEE TECHNOLOGICAL UNIVERSITY TEACHER EVALUATION MODEL-YEAR VI

In 1973 Tennessee Technological University developed and implemented a model for systematic data gathering and for making evaluations of the programs in teacher education. The specific objective of the use of the longitudinal model was the evaluation of and subsequent modification and improvement of the programs for the preparation of teachers. During the sixth year of the project (1978-1979) five distinct groups of graduates who had either completed the B.S. or M.A., with major emphasis in a teaching field, participated in the study. The sample size by year of graduation was as follows: (1) 1974, 11; (2) 1975, 13; (3) 1976, 11; (4) 1977, 27; and (5) 1978, 57 (including 21 M.S. and 36 B.S. graduates). Detailed information was collected on each subject by use of standardized instruments administered by specially trained graduate assistants or from University records. Basic instrumentation and procedures included: (1) University records; (2) principal's evaluations; (3) the California F-Scale; (4) a measure of the satisfaction of the students of the graduates; and (5) observation by trained observers using Flanders Interaction Analysis, the Classroom Observation Record and the Tuckman Teacher Feedback Form. All data obtained in the study were classified, coded and key punched for analyses. Descriptive statistics, intercorrelations and comparisons were computed.

The major findings of the study for the first year subjects were similar to those reported in the past. Detailed comparisons across years for all first year B.S. subjects by level (elementary or secondary), indicated few differences. Comparisons of 1978, B.S. and M.A. graduates indicated that the latter group generally received higher ratings or scores. Detailed comparisons were made across five years for two groups of B.S. level subjects, i.e., those who participated from 1973 through 1977 and 1974 through 1978. The data were further divided by teaching level. In general, the subjects appeared to receive their highest ratings or scores during the third or fourth year they participated in the study. Few of the differences noted were significant. Possible explanations for the differences and changes were noted in the report. Based on the results of the study, conclusions and recommendations have been advanced that are being used to modify and improve the teacher education programs of the University.

Based on the results of the study and the applications that have been made in improving the teacher preparation programs of the University, the model has become a permanent operational feature of the College of Education. Other institutions of higher education can easily adopt or adapt the model for use in their own institutions.

PREFACE

For the past nine years, attention has been given to the evaluation of the graduates of the teacher preparation programs of Tennessee Technological University. Followup studies of all graduates have been conducted on a regular basis and special studies have been carried out to provide input for the overall operation of the programs of the University. In order to improve the system of evaluation at the institution, an intensive longitudinal study was initiated in the fall of 1973 of the graduates. This study was continued through 1978-1979 utilizing a modified model that was previously developed for evaluating graduates of teacher education programs. Reports of the results of the application of the model for the period 1973-1974 through 1977-1978 are available through the ERIC system or from the Office of the Associate Dean of the College of Education of Tennessee Technological University.

The purpose of this present report was to present the findings of the sixth year of the application of the Tennessee Technological University Teacher Evaluation Model. In turn, this report will be utilized by providing input into the total system of teacher education at the University. This report is by no means complete; however, it serves to inform the reader of the basic procedures used and the preliminary findings of the sixth year of the study. In order to conserve paper, only essential information was presented.

The author of this report is indebted to the efforts of several individuals that have been extensively involved in working with the project during the past year. These individuals include: Glenda S. Qualls, Analyst; Barbara Orr, Graduate Assistant; Suzan Burnett, Graduate Assistant; Mary Elledge, Graduate Assistant; Sharon Heard, Secretary; Linda Carroll, Secretary; and Dr. John D. Thomas, Associate Professor of Educational Psychology and Counselor Education. In addition, thanks are extended to all principals, teachers, superintendents and other school personnel that provided technical assist ance, data, and allowed the project staff to work with them in various ways.

Jerry B. Ayers,
Associate Dean
College of Education
August, 1979

CHAPTER I

INTRODUCTION AND PROCEDURES

Beginning in 1970, a series of separate studies was begun related to the evaluation of students enrolled in and graduates of the teacher education programs of Tennessee Technological University. The research has been systematic and designed to meet standards established by the National Council for Accreditation of Teacher Education, as well as to answer such questions as course effectiveness, the proper sequence of courses, factors related to achievement, success of the graduates after entering the teaching profession, better methods of instruction, and the degree of achievement of the stated competencies of the teacher education program. It should be noted that there are companion studies to evaluate the programs designed to prepare school service personnel at the M.A. and Ed.S. levels (see Appendix).

The works of Sandefur and Adams (1, 2, 3) led to the development of a model (Tennessee Technological University Teacher Evaluation Model) for the evaluation of graduates of the programs of the University designed to prepare teachers at the bachelor's and master's levels (4). During 1973-1974 the Evaluation Model was implemented and continued through 1978-1979 with funds available from the budget of the College of Education of the University. The results of the application of the model were summarized in a series of yearly reports (5, 6, 7, 8, 9).

The sixth year of the application of the Evaluation Model was initiated in the fall of 1978. The remainder of this chapter describes the purposes of the sixth year of the operation of the model and limitations of and the procedures used in conducting the major phases of the study. Chapters II and III contain presentations and interpretations of the data for the current year of the study and comparisons with earlier years. Chapter IV contains a summary, conclusions and recommendations, and tentative plans for continuation of the study during 1979-1980. The appendix contains a listing of all evaluative studies that have been conducted as a part of the efforts of the Office of the Associate Dean.

Purposes

The purposes of the study reported in this document included the following:

1. To provide information for faculty and administrators concerned with teacher education programs at Tennessee Technological University in making decisions pertinent to curriculum evaluation and development.

2. To aid in the process of making long-range plans for improving the total program of the University with particular emphasis on the teacher education programs.

3. To continue the development and refinement of the Tennessee Technological University Teacher Evaluation Model.

Specific objectives to be accomplished as a part of this study were as follows:

1. To continue studying in a longitudinal manner those subjects who had previously participated in the application of the Model (1974-1975 through 1977-1978).

2. To provide a descriptive profile of a sample of 1978 B.S. and M.A. graduates of the teacher education programs of Tennessee Technological University.

3. To determine relationships among selected variables that were measured as a part of the total study.

4. To provide comparisons between the graduates of the teacher education programs of Tennessee Technological University with those who might be considered as effective teachers as defined in the original literature of teacher education.

5. To provide effective dissemination of relevant research data to the faculty and administration of the University associated with the teacher education programs.

6. To provide information and suggestions for curriculum evaluation and development based on empirical research data.

7. To continue to evaluate the procedures employed in the study and to make long-range plans for modifications and refinement of the basic Evaluation Model.

Limitations

The general limitations for this study were primarily concerned with sampling techniques:

1. Subjects for the study were individuals who were 1978 graduates of a bachelor's or master's level program at Tennessee Technological University designed to prepare them as teachers or they were individuals who participated in the study during the period 1974-1975 through 1977-1978.

2. Subjects were teaching in the State of Tennessee within a 100-mile radius of Cookeville, Tennessee. (Approximately 70 percent of all graduates of the teacher education programs of the University, that were teaching, resided within the specified geographical limits of the study.)

3. The subjects volunteered to participate in the study.

4. The subjects who participated in the study received the permission of their principals and superintendents.

5. The sample sizes of the 1974, 1975, 1976 and 1977 graduates were reduced each year by about 40 percent due to attrition from the teaching profession or moving out of the geographical limits of the study. Therefore, the findings of the study may be limited in their applicability to the population of graduates from the University and also other institutions.

Limitations 1 through 4 above were imposed in order to make the more feasible regarding the followup of the graduates. Voluntary cipation was deemed necessary due to the extensive collection of data the cooperation required from the subjects for classroom observations mpletion of forms. The limitation of a 100-mile radius of Cookeville, see, was necessary because of the limited travel funds available and me available for the research assistants to visit in the classrooms participating subjects.

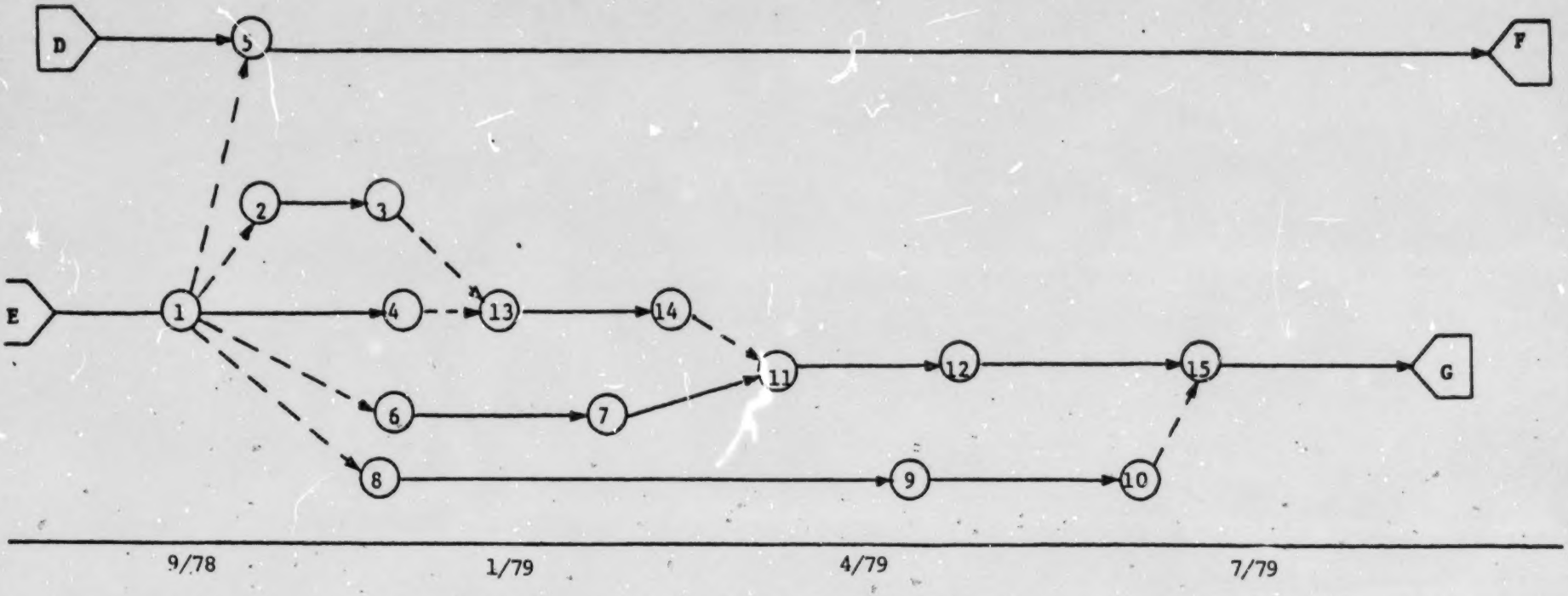
Procedure

The purpose of this section was to provide the reader with a brief ption of the procedures employed in collecting data utilized in this This section was concerned specifically with selection of subjects, entation of the study, training of staff, and methods of data collec- nd analyses. Figure 1 shows a PERT chart of the major activities of oject from September 1978, through June 1979. In order to conserve the reader is referred to previous reports (5, 6, 7, 8, 9) for a complete description of such topics as instrumentation and training ervers.

tion of Subjects

Five groups of subjects participated in the 1977-1978 phase of the t. The first group of individuals (1974 graduates) was participating project for the fifth year, while the second group (1975 graduates) rticipating for the fourth year. The third, fourth and fifth groups ted of those individuals that received either the B.S. or M.A. in, tively, 1976, 1977 or 1978. Table 1 shows a summary of the number of duals (by year of graduation) participating in each phase of the study, ble 2 shows a summary of the grade level in which the subjects were ng during 1978-1979.

Table 3 shows a summary of the reasons and number of individuals fail- participate in the 1978-1979 phase of the study. This table shows the withdrawing from the study by original date of graduation from the sity. Between 1977-1978 and 1978-1979, 37 individuals withdrew; 16 duals (43.2 percent) felt the objectives of the project were not compat- ith personal objectives, 1 individual (3.9 percent) moved into a non- ng profession and 11 individuals (29.9 percent) gave no reason or could located. The overall attrition between the two years was 37 individ- r 36.6 percent. This figure is comparable with the level of attrition n other years of the study (6, 7, 8 and 9). Table 4 shows a comparison ple size, across all years, from which actual usable data was collected.



Summary of Activities

1-4 Finalize Plans for Visiting Subjects in 1974-77 Phases of Study	9-10 Prepare Reports of Related Studies
2-3 Training of Observers	7-11 Select Sample of 1978 Graduates for Intensive Study as Part of Followup
5-- Continuing Contact With Other Projects and Survey of the Literature	11-12 Make School Visits on 1978 Graduates
6-7 Survey All 1978 Graduates	13-14 Make School Visits on 1974-77 Graduates
8-9 Conduct Other Related Studies	12-15 Complete Reports and Submit
	15--- Begin Making Plans for 1979-80 Phase of Study

Figure 1: PERT Chart of Major Activities for 1978-1979

TABLE 1

NUMBER OF SUBJECTS BY YEAR OF GRADUATION PARTICIPATING IN EACH PHASE OF STUDY

Phase of Study	1974	1975	1976	1977	1978	Total
1974-1975	16/33	--	--	--	--	16/33 *
1975-1976	8/18	12/32	--	--	--	20/50
1976-1977	6/15	5/20	5/21	--	--	16/66
1977-1978	6/8	5/13	2/14	23/30	--	36/65
1978-1979	5/6	5/8	3/8	14/13	21/36	48/71

* No M.A./No. B.S.

TABLE 2

SAMPLE FOR INTENSIVE FOLLOWUP-1978-1979

Year	K	1-3		4-7		8-12**	SPED	Total
1974	1/0	0/1	0/1	1/1	1/2	2/0	0/0	5/6
1975	2/1	0/3	0/0	2/1	0/2	1/1	0/0	5/8
1976	0/1	0/4	0/0	1/1	1/0	0/2	1/0	3/8
1977	1/1	3/1	0/0	4/5	0/0	3/4	3/2	14/13
1978	2/2	3/10	0/3	2/8	1/1	8/9	4/2	21/36
Total	6/5	6/19	0/4	10/16	3/5	14/16	8/14	48/71

* No M.A./No. B.A.

** Teaching areas: 5-English, 5-Math, 1-Music, 4-Science, 2-Physical Education, 1-Business, 3-Vocational Agriculture, 1-Health, 1-Industrial Arts, 4-History and 1-Building Trades

TABLE 3

REASONS AND NUMBER OF INDIVIDUALS DROPPING OUT OF STUDY FROM 1977-1978 to 1978-1979 (BY YEAR OF GRADUATION FROM UNIVERSITY)

Reason	1974	1975	1976	1977	Total
Felt Objectives of Project were not comparable with personal objectives	2	3	2	9	16
Moved into non-teaching position in schools	1	0	0	0	1
Left Teaching Profession	0	1	0	8	9
Other Reason	0	1	0	4	5
Unable to Locate (No response to questionnaire, phone calls or no forwarding address at Post Office)	0	0	2	4	6
Total	3	5	4	25	37

TABLE 4

COMPARISON OF SAMPLE SIZES ACROSS YEARS

Year of Graduation	1973	1974	1975	1976	1977	1978
1973	57	35	27	21	15	--
1974	--	48	26	22	14	9
1975	--	--	44	23	17	11
1976	--	--	--	26	16	11
1977	--	--	--	--	50	26
1978	--	--	--	--	--	45
Total	57	83	97	92	112	102

As a part of the routine followup activities of the Office of the Associate Dean, all 1978 graduates of the teacher education programs were contacted in the late fall of 1978 (309 B.S. graduates and 143 M.A. graduates). As a result of this initial survey (10), all graduates who were teaching within the defined geographical limits of the project were contacted by mail and/or telephone and asked to participate in this study. A total of 36 B.S. and 21 M.A. level graduates volunteered to participate (see Tables 1 and 2).

Figure 2 shows a map of selected portions of Tennessee. The numerals within each county indicate the number of individuals who participated in the study during the 1978-1979 year. Table 5 shows a summary of the number of individuals by year of graduation participating from each county.

Instrumentation

Instrumentation for the 1978-1979 study was identical to that used during the past several years of the project. The reader is referred to Reports 77-2 and 78-2 (8,9) for more information with regard to instrumentation.

Training of Observers

The procedures for the training of observers were outlined in Reports 74-4 and 77-2 (4,8).

TABLE 5

NUMBER OF SUBJECTS BY DATE OF GRADUATION AND COUNTY IN WHICH TEACHING 1978-1979

County	1974	1975	1976	1977	1978	Total
Bledsoe	1				1	2
Bradley				1		1
Cannon					1	1
Clay					2	2
Coffee	1					1
Cumberland	1			3	5	9
DeKalb					3	3
Fentress		3		2	4	9
Jackson	1	1		1	2	5
Loudon						0
McMinn					1	1
Macon				1	2	3
Marion					2	2
Monroe					1	1
Morgan				2	1	3
Overton	3				4	7
Putnam	3	2	4	5	9	23

TABLE 5 (Cont'd)

Rhea		1			1	2
Roane		2			1	3
Robertson			2	1	1	4
Sequatchie	1		2	1		4
Scott					1	1
Smith					5	5
Sumner				1	2	3
Van Buren			1		2	3
Warren			1		1	2
White		4		6	3	13
Wilson				1		1
Total	11	13	10	25	55	114

Collection of Data

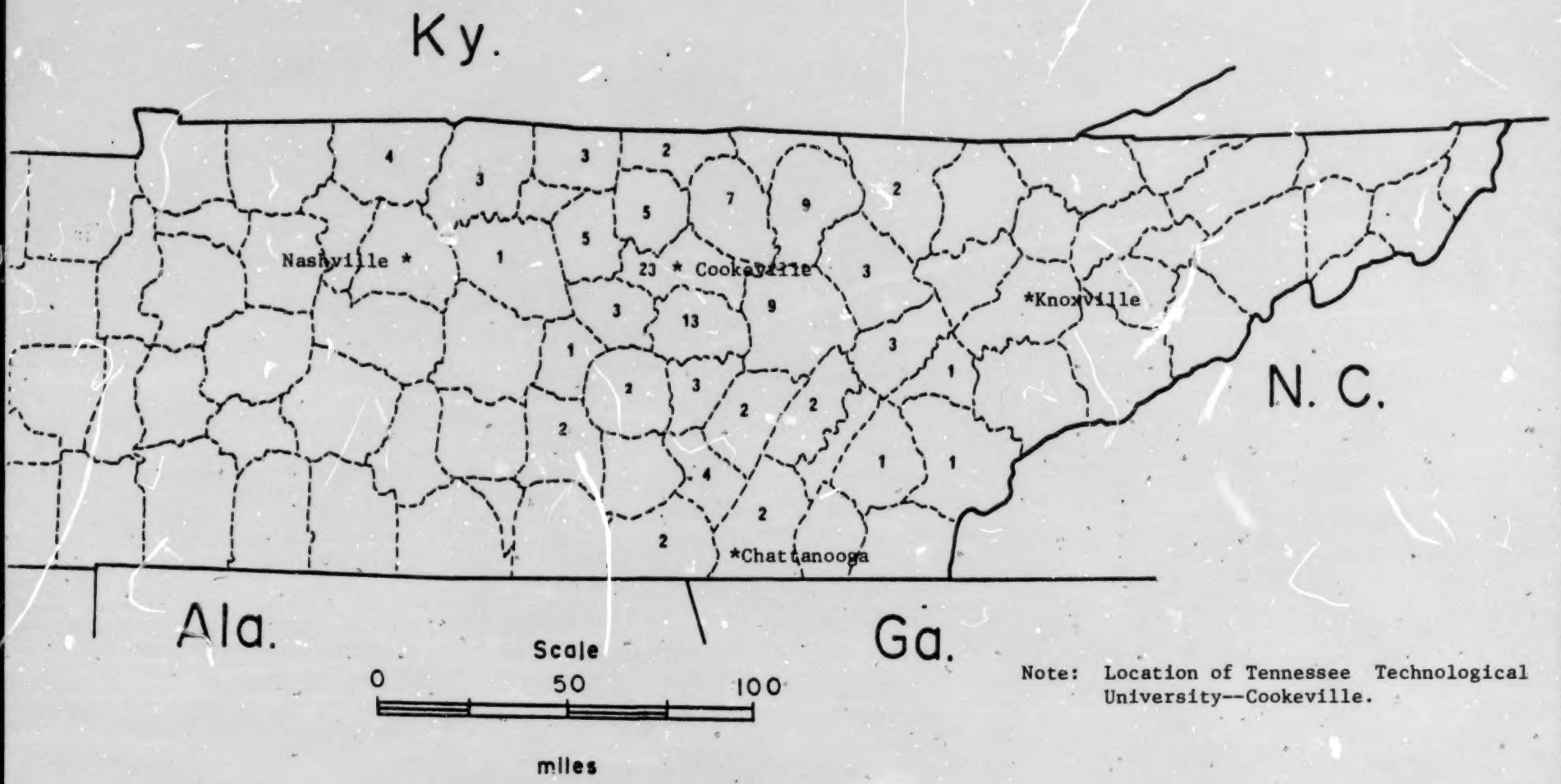
Data for this study were collected by mail surveys, interviews and observations in the classrooms of graduates. Initially, all subjects were contacted by mail and dates were set for observational visits by the graduate research assistants (both previous subjects and new subjects in the study). These dates were verified with the appropriate administrative authorities in each school and school system. A letter explaining the project in detail was sent to all subjects, principals and superintendents. The subjects, their principals and superintendents were invited to make comments and suggestions for conducting the study.

Each subject was visited on at least one occasion by the trained graduate assistant. The observer spent approximately a half day in each subjects's classroom and completed from two to six 20 minute periods observing, using a ten category system of interaction analysis. At the completion of all observations, the Classroom Observation Record and the Tuckman Teacher Feedback Form were completed.

The appropriate version of the Student Evaluation of Teaching (SET) was administered during the visit. The instrument was completed by at least one class of students. While the students were completing the SET, subjects who were participating in the project for the first year completed the California F-Scale.

During the course of the day, the observer interviewed each subject with regard to their opinions and ideas about the teacher preparation program of the University. Also, the observers asked each principal to complete the Principals Questionnaire and also the Teacher Evaluation by Supervisor Form.

Pertinent data such as quality point average, National Teachers Examination scores, etc., were collected from the permanent records of all 1976 graduates.



Note: Location of Tennessee Technological University--Cookeville.

Figure 2. Number of Participants By County in 1978-1979 Phase of Study

Analysis of Data

Basic descriptive and inferential statistical methods were used to analyze the data. These techniques are described in more detail at the appropriate points in this report.

Summary

In summary this chapter contains a brief overview of the total operation of the 1978-1979 phase of the longitudinal study of the graduates of the teacher education programs of Tennessee Technological University. Included in this chapter was a summary statement of the major purposes of the project, limitations of the study and the major procedures employed in conducting the study. Data was gathered from four major sources including self or personal, from supervisors and principals, students of the graduates, and by indenpendent observers. Included in the chart is a listing of the major instruments used in gathering data from the four primary sources. The major purposes and procedures of the project have remained virtually unchanged over the six years of the study. It is felt that the information available from this report and the companion reports completed during the period 1974 through 1978 will be useful to those individuals attempting to replicate this study. It should be pointed out that additional information and specifics related to methodology employed in this study are available from the Office of the Associate Dean, College of Education.

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CHAPTER II

PRESENTATION AND ANALYSES OF DATA FOR 1978 GRADUATES AND COMPARISONS WITH ALL FIRST YEAR GRADUATES 1974-1977

Chapter II contains a presentation and analyses of data for those individuals who received the B.S. or M.A. in 1978 and were participating in the study for the first time. Also shown are comparisons of the data with other first year participants for the period 1974 through 1977. These comparisons were confined to those individuals with the B.S.

The data for the B.S. subjects were presented in six parts, each corresponding to major instruments used to gather data. Each section contained a summary statement as well as a discussion of the relevant variables that were correlated. A seventh section shows comparison data between the 1978 B.S. and M.A. Graduates. Tables 6 and 7 show intercorrelation matrics of selected variables for respectively the B.S. and M.A. graduates. Only variables significant at or beyond the .05 level were discussed in the remainder of this report. It should be noted that the correlation patterns are similar to those reported in earlier years of the study.

An understanding of Chapter I of this report is essential for the effective utilization of Chapters II through V. Also, reports 74-4, 75-4, 76-1, 77-2 and 78-2 should be used as companion guides to obtain additional information that may be of interest to the reader. The Appendix of this report contains a complete listing of all studies that have been conducted in the past nine years that may provide additional information about the evaluation studies conducted of the teacher preparation programs. Selected reports contain complete instrumentation used in the studies.

Career Base Line Data

This section contains a summary of preliminary career base line data for the 1978 B.S. subjects in the study. Included in this section was information taken from each subject's college transcript and other records available in the College of Education of the University. Also included were scores from the California F-Scale. Additional base line data for the 1978 graduates can be found in Report 79-1 (1). In order to avoid duplication and also to present the data in a more usable form each table shows comparison with other first year subjects in the study from 1973 through 1977.

The B.S. level subjects who were participating in the study for the first year in 1978 appeared to be similar to those from previous years. The mean quality point average for four years of study was 2.98 (SD=0.59) which is slightly below that reported for the 1977 participants. In general the subject who have participated in the study in the past have achieved higher quality point average than the average graduate of the University's teacher preparation programs.

Table 8 shows a comparison of the American College Test scores (ACT) for the period 1974 through 1978 for first year elementary subjects. In general the subjects were near the mean for all students enrolled at the University. Use of the analysis of variance techniques indicated the

TABLE 6

CORRELATION MATRIX OF SELECTED VARIABLES- B.S. GRADUATES IN FIRST YEAR OF STUDY

	N	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1. Wt. Common (MTE)	25	1000	070	463	-216	076	-030	-209	-184	-055	-058	130	-180	-292	-213	346	348	351	130	347	528	528	528	205	367	291	115	294	082	146	-131	-271
2. Overall QPA	27		1000	608	-184	-290	-032	-045	-227	178	198	-034	-357	-081	044	055	050	039	039	039	023	023	023	-058	108	-022	-100	-105	427	304	292	253
3. ACT Composite	21			1000	-350	-028	021	048	-279	167	-092	132	-333	-594	-299	187	175	183	187	190	241	241	241	084	202	-127	157	073	102	363	-018	-186
Principal Evaluation																																
4. I	17				1000	433	681	512	115	-422	388	-133	367	184	316	-139	-138	-131	-134	-150	213	213	213	321	311	371	-032	409	-128	-157	-160	-061
5. II	16					1000	781	713	-095	172	-074	-086	184	068	-031	-149	-151	-130	-130	-131	184	184	184	853	464	566	-228	522	-301	-236	-484	-346
6. III	15						1000	837	063	-422	388	-133	368	184	316	-047	-045	-030	-041	-040	205	205	205	969	669	717	-468	641	-241	-206	-094	-287
7. IV	15							1000	031	046	347	341	363	196	537	-022	-016	-007	-015	-021	-211	-211	-211	911	549	610	-434	506	-202	-170	-227	-461
8. F-Scale	26								1000	-034	128	181	340	428	345	234	240	245	259	248	-021	-021	-021	-120	-238	-216	-209	-339	-046	-397	-084	-070
Student Evaluation of Teaching I																																
9. I	14									1000	470	630	038	188	412	321	186	036	501	-288	-157	-157	-157	-	-	-	-	-	192	292	-121	130
10. II	14										1000	781	466	614	898	259	396	240	354	-618	158	158	158	-	-	-	-	-	-118	171	405	214
11. III	14											1000	415	405	262	138	329	457	392	-317	-081	-081	-081	-	-	-	-	-	-210	083	089	-070
12. IV	14												1000	671	740	-271	-177	114	-044	043	480	080	080	-	-	-	-	-	-323	-320	024	-023
13. V	14													1000	740	075	195	-017	363	-093	-118	-118	-118	-	-	-	-	-	-348	-384	-030	030
14. VI	14														1000	146	277	190	243	-434	-002	-002	-002	-	-	-	-	-	-149	022	338	145
Interaction Analysis																																
15. I/D	26															1000	997	996	997	996	147	109	-220	-040	-036	-078	184	-080	236	219	229	162
16. I/A	26																1000	992	993	990	132	080	-219	-030	-044	-080	162	083	210	196	221	144
17. D/A	26																	1000	997	996	173	093	-234	-044	-056	-096	172	-096	191	171	210	140
18. D/I/Tot	26																		1000	998	156	079	-243	-043	-050	-090	154	-091	214	179	192	143
19. Loc/Tot	26																			1000	167	098	-236	-045	-048	-091	165	-090	221	190	199	147
Classroom Observation Record																																
20. I	27																				1000	1000	1000	-427	-032	-127	428	-185	282	-178	733	581
21. II	27																					1000	1000	-335	079	-035	384	-153	400	400	700	357
22. III	27																						1000	-108	354	275	-068	160	297	243	520	331
Student Evaluation of Teaching II																																
23. I	13																							1000	747	833	434	707	097	-136	-248	-241
24. II	13																								1000	927	-370	880	595	223	183	222
25. III	13																									1000	-409	893	480	102	071	139
26. IV	13																										1000	-323	-292	280	301	159
27. V	13																											1000	313	-006	027	052
Techaus																																
28. I	26																												1000	329	309	545
29. II	26																													1000	494	400
30. III	26																														1000	769
31. IV	26																															1000

TABLE 7

CORRELATION MATRIX OF SELECTED VARIABLES - 1978 M.A. GRADUATES IN FIRST YEAR OF STUDY*

	N	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
(GTE)	6	1000	963	679	-917	-258	308	-258	179	471	467	196	870	-442	453	-459	258	-420	-411	-299	-644	-653	-366	-305	-298	-409	-681
	18		1000	423	-174	-011	-202	081	248	-037	-089	-182	-010	-458	-257	-106	360	126	316	-506	-075	-029	-161	-149	-165	-026	-254
e	8			1000	-830	-732	-249	-732	431	-038	536	030	713	-683	077	-248	-411	-076	119	182	-147	-476	-354	-289	-045	-099	-629
ation																											
	14				1000	739	708	753	280	036	-356	-291	-414	679	-038	367	217	-413	-068	011	-256	-100	-051	-119	240	-231	130
	14					1000	657	892	185	105	-277	-231	-315	650	039	280	190	-307	-036	-194	-335	-137	-039	-229	-065	-395	022
	14						1000	533	250	072	-263	-311	002	479	054	495	-214	-450	046	482	-564	-435	-319	-402	362	-414	-353
	14							1000	401	153	-183	-118	334	605	082	310	220	-458	-023	-139	-306	-118	-185	-160	-119	-392	-016
	16								1000	556	-051	333	-038	240	360	134	-319	-598	-046	-000	398	291	360	007	286	407	298
ion of Teaching ?																											
	12									1000	390	742	370	573	921	192	172	-121	125	-120	327	344	390	226	305	487	259
	12										1000	383	607	-217	497	-259	002	-065	-043	-108	288	202	159	073	-404	286	-036
	13											1000	231	437	869	014	228	022	-280	-093	563	596	593	768	392	819	461
	12												1000	-223	491	-416	054	-190	-110	-156	-076	-089	-011	-015	-179	030	-313
	12													1000	591	254	192	-031	-025	041	019	095	218	296	456	063	331
	13														1000	-124	212	-101	-112	-113	329	355	427	454	282	442	264
ivals																											
	18															1000	040	-089	-175	249	-116	-165	-091	-133	248	-117	-155
	18																1000	325	-134	-606	123	222	088	266	085	052	165
	18																	1000	362	-097	-200	-162	-226	041	-035	-139	-194
	18																		1000	098	-456	-504	462	-552	-034	-268	-523
	18																			1000	-131	-268	-274	-324	272	-035	-300
rvation Record																											
	18																				1000	930	813	616	266	880	814
	18																					1000	866	713	259	864	716
	18																						1000	592	419	874	861
	18																							1000	303	310	679
	18																								1000	487	296
	18																									1000	723
	18																										1000

icates a correlation significant at or beyond the .05 level.
s have been omitted.

TABLE 8

COMPARISON OF ACT SCORES FOR FIRST YEAR ELEMENTARY TEACHERS (1974-1978)

Score	1974 (N=24) $\bar{X}$	SD	1975 (N=17) $\bar{X}$	SD	1976 (N=15) $\bar{X}$	SD	1977 (N=14) $\bar{X}$	XD	1978 (N=17) $\bar{X}$	SD
English	18.1	4.9	19.5	4.8	19.1	3.0	20.0	3.9	19.1	3.7
Mathematics	16.0	6.0	16.2	5.0	16.7	6.0	17.4	6.7	13.7	6.7
Social Science	16.5	5.7	20.4	5.3	17.9	6.2	19.6	7.4	16.6	7.0
Science	19.2	4.6	20.3	3.9	20.2	3.7	19.6	5.6	19.8	4.6
Composite	17.6	3.8	19.2	3.6	18.7	3.8	19.4	5.1	17.6	4.5

TABLE 9

COMPARISON OF ACT SCORES FOR FIRST YEAR SECONDARY TEACHERS (1974-1978)

Score	1974 (N=2) $\bar{X}$	SD	1975 (N=9) $\bar{X}$	SD	1976 (N=4) $\bar{X}$	SD	1977 (N=10) $\bar{X}$	SD	1978 (N=4) $\bar{X}$	SD
English	16.0	4.2	17.4	7.0	19.8	4.1	18.6	4.5	19.5	1.3
Mathematics	19.0	4.2	17.3	5.9	16.0	9.1	19.6	7.6	21.8	1.7
Social Science	16.5	10.6	14.1	8.0	19.5	4.8	19.5	5.7	22.5	3.7
Science	25.5	0.7	17.0	6.3	22.3	1.5	20.4	7.7	19.8	3.5
Composite	19.5	0.7	16.8	5.4	19.5	3.1	19.8	5.8	21.0	2.2

subjects in the 1978 group had achieved a significantly lower mean score on the mathematics section of the test than subjects in other groups. Table 9 shows a comparison of ACT scores for the secondary group. In general there were no significant differences across the groups. The small N size in some cases does not allow for meaningful comparisons of the data. Significant correlations were noted between ACT scores and overall quality point average (+) and the Non-Directive (-) factor of the SET-I.

The California F-Scale Forms 45 and 40 was used to assess one aspect of the personality of the Subjects. The F-Scale range of possible values was 28 to 196 with 112 the mid-point. The lower the values, the more non-authoritarian the indiciation. The mean score for all graduates who have participated in the study is 100. Table 10 shows a comparison of all first year subjects by level, for the period 1974 through 1978. In general, secondary subjects tended to be more authoritarian than elementary subjects, however the differences were not significant. The correlational pattern indiciated that individuals with higher F-Scale scores exercised a higher degree of discipline in the classroom and appeared to be less dynamic.

Table 10A shows a comparison of Weighted Common Examiniation Scores from the National Teacher Examinations for elementary and secondary subjects by years of graduation. In general secondary subjects had slightly higher scores than the elementary subjects. However, once again, the differences were not significant. Significant positive correlations of NTE scores were noted with ACT scores and factors from the COR and interaction analysis.

Principal Evaluations of Subjects

The principal of each subject was asked to complete two instruments designed to evaluate weaknesses and strengths of the individual. The first instrument consisted of 59 items related to the teacher education program of the subjects and has been used over the past nine years. The results were very similar to those previously reported and have been omitted from this report. The second instrument, the Teacher Evaluation by Supervisor form, consists of four questions encompassing the following areas: (a) subject matter competence, (b) relations with students, (c) appropriateness of assignments, and (d) overall effectiveness. Tables 11 and 12 show, respectively, the data for the elementary and secondary groups during their first year in the study. Over the five year period there appeared to have been a gradual increase in the mean ratings given to the subjects in the elementary groups. There are variations among the secondary groups and no clear pattern was established because of the small N size. Significant correlations were noted between the Relations with Students factor and the Rapport factor from the Student Evaluation of Teaching-II and the Organized Demeanor factor of the Tuckman. Appropriateness of assignments correlated significantly with the discipline factor for the Student Evaluation of Teaching-I and the Rapport and style factors of the lower grades student evaluations. Overall Effectiveness was correlated significantly also with the Rapport factor.

Student Evaluation of Teaching

Two forms of the Student Evaluation of Teaching were employed in the study. The SET-I was used with children in the classes of subjects above the

TABLE 10

COMPARISON OF F-SCALE SCORES FOR FIRST YEAR ELEMENTARY AND SECONDARY TEACHERS (1974-1978)

	1974			1975			1976			1977			1978		
Level	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Elementary	29	101.3	20.6	22	101.5	23.6	11	95.9	13.7	17	99.5	20.8	21	103.4	22.2
Secondary	2	102.5	21.9	9	102.9	27.1	4	113.3	17.8	11	103.3	27.8	6	96.4	9.9

Table 10A

COMPARISON OF WEIGHTED COMMON EXAMINATION SCORES FROM THE NTE FOR FIRST YEAR ELEMENTARY AND SECONDARY TEACHERS (1974-1978)

	1974			1975			1976			1977			1978		
Level	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD	N	$\bar{X}$	SD
Elementary	23	573.3	78.2	22	577.7	79.1	17	584.5	56.9	19	581.6	63.0	19	574.2	61.7
Secondary	2	598.5	54.4	9	543.8	87.9	4	597.3	45.6	11	585.3	30.2	6	606.5	73.6

TABLE 11

COMPARISON OF PRINCIPALS RATINGS OF FIRST YEAR ELEMENTARY TEACHERS (1974-1978)

FACTOR	1974 (N=27)		1975 (N=20)		1976 (N=16)		1977 (N=18)		1978 (N=14)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I SUBJECT MATTER COMPETENCE	4.0	0.8	4.1	0.6	4.4	0.7	4.3	0.7	4.5	0.6
II RELATIONS WITH STUDENTS	4.1	0.7	4.4	0.6	4.6	0.6	4.4	0.6	4.4	0.9
III APPROPRIATENESS OF ASSIGNMENTS	4.2	0.7	4.3	0.7	4.4	0.7	4.4	0.6	4.3	1.1
IV OVERALL EFFECTIVENESS	4.0	0.8	4.1	0.7	4.5	0.6	4.2	0.7	4.4	0.7

TABLE 12

COMPARISON OF PRINCIPALS RATINGS OF FIRST YEAR SECONDARY TEACHERS (1974-1978)

FACTOR	1974 (N=1)		1975 (N=8)		1976 (N=4)		1977 (N=9)		1978 (N=3)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I SUBJECT MATTER COMPETENCE	4.0	0.0	4.6	0.7	4.0	0.0	3.9	0.6	4.0	1.0
II RELATIONS WITH STUDENTS	4.0	0.0	4.8	0.7	4.3	0.5	4.3	0.7	4.7	0.6
III APPROPRIATENESS OF ASSIGNMENTS	5.0	0.0	4.3	0.9	4.0	0.0	3.9	0.6	4.0	1.0
IV OVERALL EFFECTIVENESS	5.0	0.0	4.4	0.7	3.8	0.5	3.8	0.4	4.0	1.0

third grade, while the SET-II was used with children below the fourth grade. The instruments measure similar traits. Table 13 shows the data for the Student Evaluation of Teaching-I for those elementary subjects teaching in grades 4 through 6. In general there are few differences across the five years. Table 14 shows similar data for the secondary subjects. The wide variations were due to the small sample sizes. Significant negative correlations were noted between the second and third factors and the Lecture/Total teaching ratio from the interaction analysis and Factor I of the COR (businesslike, responsible and systematic behavior of the teacher).

Student Evaluation of Teaching-II data was collected for those subjects teaching in grades K-3. This data is shown in Table 15 and again indicates few differences across the five year period. No additional significant relations were noted between the factors from the instrument and other scores.

Interaction Analysis

A ten category interaction analysis system was utilized to record observed classroom behavior of the subjects. The system proposed by Amidon and Flanders was implemented with the aid of three specially trained graduate assistants. A set of three to four observations was made on each subject. Each set contained from two to eight 20-minute periods of observation.

Tables 16 and 17 show the pertinent data gathered respectively on the elementary and secondary groups. The i/d ratios reported are above the .05 average for teachers reported in earlier studies. More indirect teaching has been associated in some studies with higher student achievement and positive attitude formation. The I/D ratio is also higher than the ratio of less than 1.00 reported for the average teacher. The subjects in this study used more acceptance of feeling, praising, or encouraging than average teachers. Other ratios in Table 16 and 17 are similar to the ratios for teachers reported in other studies. There were few differences between the groups and across the years. As would be expected secondary subjects were lecturing much more than elementary subjects. There were high intercorrelations among the various elements of the interaction analysis, however, correlations with other variables were limited to those noted above.

Classroom Observation Record

The Classroom Observation Record was completed on each subject by the observers at the conclusion of each visit. The instrument consisted of 22 items, four designed to assess pupil behavior and the remaining 18 assess dimensions of teacher behavior. Previous studies led to the conclusion that the instrument was measuring three factors as follows: Factor I consisted of items 10, 12, 14, 15, 16, 17 and 18, and corresponded in part to Ryans' Y_o factor of responsible, systematic, businesslike versus evading, unplanned, slipshod teacher behavior; Factor II consisted of items 5, 6, 7, 8, 9, 11, 13, 19, 20, 21 and 22, and corresponded to Ryans' X_o factor of kindly, understanding, friendly versus aloof, egocentric, restricted teacher behavior; Factor III consisted of items 1, 2, 3, and 4 which described pupil behavior (1,2). Scores from individual items were summed to obtained a factor score. Table 18 and 19 contain summaries of the means and standard deviations for

TABLE 13

COMPARISON OF SET I SCORES FOR FIRST YEAR ELEMENTARY TEACHERS (1974-1978)

FACTOR	1974 (N=8)		1975 (N=10)		1976 (N=6)		1977 (N=7)		1978 (N=8)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I FRIENDLY AND CHEERFUL	325.3	48.2	344.8	34.0	330.5	37.8	335.0	62.1	334.6	46.3
II KNOWLEDGEABLE AND POISED	322.4	43.5	348.0	26.1	315.2	46.1	312.6	47.4	355.4	26.9
III LIVELY AND INTERESTING	315.6	40.4	298.8	41.5	286.0	35.1	296.3	30.3	301.0	39.7
IV FIRM CONTROL (DISCIPLINE)	305.4	38.7	324.2	37.2	295.3	33.5	285.7	77.8	311.1	35.6
V NON-DIRECTIVE (DEMOCRATIC PROCEDURE)	255.9	40.8	245.3	57.3	271.3	35.1	222.7	43.9	285.0	40.8
COMPOSITE SCORE	304.6	19.0	312.2	28.5	299.7	23.5	290.1	40.6	317.4	28.9

TABLE 14

COMPARISON OF SET I SCORES FOR FIRST YEAR SECONDARY TEACHERS (1974-1978)

FACTOR	1974 (N=1)		1975 (N=9)		1976 (N=4)		1977 (N=11)		1978 (N=6)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I FRIENDLY AND CHEERFUL	219.0	0.0	350.7	33.1	365.5	13.7	333.1	30.0	338.8	31.8
II KNOWLEDGEABLE AND POISED	370.0	0.0	396.6	23.7	350.0	16.9	333.3	21.9	299.8	39.9
III LIVELY AND INTERESTING	292.0	0.0	308.8	37.1	304.8	40.8	282.8	20.0	272.8	67.2
IV FIRM CONTROL (DISCIPLINE)	348.0	0.0	283.2	28.0	277.3	29.6	285.5	30.8	246.0	40.8
V NON-DIRECTIVE (DEMOCRATIC PROCEDURE)	170.0	0.0	250.0	40.1	281.8	58.0	265.8	52.8	204.3	40.6
COMPOSITE SCORE	280.0	0.0	307.8	23.7	315.8	18.9	309.2	28.0	263.5	31.7

TABLE 15

COMPARISON OF SET-II SCORES FOR FIRST YEAR ELEMENTARY TEACHERS (1974-1978)

FACTOR	1974 (N=20)		1975 (N=13)		1976 (N= 8)		1977 (N=10)		1978 (N=12)	
	X	SD	X	SD	X	SD	X	SD	X	SD
I RAPPORT	5.14	1.70	5.83	0.74	5.66	0.37	5.52	0.61	5.45	1.78
II INTERACTIONAL COMPETENCE	5.35	2.81	4.45	0.38	4.60	0.31	4.68	0.78	4.87	1.00
III STIMULATING, INTERACTION STYLE (COMBINATION OF RAPPORT AND INTERACTIONAL COMPETENCE)	9.54	2.54	10.28	1.01	10.28	0.55	9.37	2.78	10.92	2.34
IV UNREASONABLE NEGATIVITY	8.07	2.07	8.68	0.99	8.83	0.60	8.21	1.80	8.06	1.55
V FOSTERANCE OF SELF-ESTEEM	6.49	1.77	6.48	0.78	6.83	0.47	6.78	0.79	6.94	0.65

TABLE 16

COMPARISON OF RATIOS FROM INTERACTION ANALYSIS FOR FIRST YEAR ELEMENTARY TEACHERS (1974-1978)

RATIO	1974 (N=28)		1975 (N=20)		1976 (N=10)		1977 (N=19)		1978 (N=19)	
	X	SD	X	SD	X	SD	X	SD	X	SD
I/D	1.40	2.04	2.62	2.37	1.98	2.25	2.85	7.31	1.01	1.11
i/d	0.69	0.46	0.76	0.36	0.73	0.41	1.50	1.68	0.73	0.51
ST/TT	0.81	1.23	0.53	0.79	0.88	0.87	0.50	0.23	0.54	0.25
Sil/Tot	0.53	0.80	0.35	0.20	0.30	0.48	0.32	0.28	0.41	0.20
Lec/Tot	0.38	0.14	0.47	0.10	0.28	.08	0.26	0.23	o.42	0.15

TABLE 17

COMPARISON OF RATIOS FROM INTERACTION ANALYSIS

FOR FIRST YEAR SECONDARY TEACHERS (1974-1978)

1974 (N=2)		1975 (N=8)		1976 (N=4)		1977 (N=11)		1978 (N=6)	
$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
0.53	0.24	4.61	4.73	5.48	3.63	3.43	4.97	1.37	1.44
0.24	0.31	0.71	0.66	0.51	0.33	1.26	1.22	0.54	1.03
0.40	0.42	0.47	0.19	1.17	0.83	1.26	1.69	0.49	0.19
0.23	0.23	0.49	0.60	0.17	0.19	0.33	0.30	0.36	0.25
0.63	0.49	0.58	0.19	0.65	0.12	0.29	0.18	0.59	0.38

TABLE 18

N OF COR FACTORS FOR FIRST YEAR ELEMENTARY TEACHERS (1974-1978)

1974 (N=20)		1975 (N=23)		1976 (N=17)		1977 (N=19)		1978 (N=20)	
$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
43.6	4.5	45.0	4.6	44.3	4.3	44.8	4.3	39.9	4.2
67.8	5.6	68.9	6.0	67.9	5.9	70.3	6.1	63.1	6.2
25.9	3.8	27.3	4.0	26.8	4.1	25.7	3.0	22.2	2.8

TABLE 19

SON OF COR FACTORS FOR FIRST YEAR SECONDARY TEACHERS (1974-1978)

1974 (N=2)		1975 (N=9)		1976 (N=4)		1977 (N=11)		1978 (N=6)	
$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
39.0	9.9	40.1	8.7	44.5	5.7	43.5	2.8	38.5	4.6
56.0	17.0	60.2	10.3	71.5	6.6	67.7	2.7	64.0	5.6
19.5	3.5	22.1	0.6	19.5	5.5	23.5	1.8	21.8	2.2

the three factor scores for the two groups. Again few differences were noted between the groups and across the five years of data reported.

Tuckman Teacher Feedback Form

The Tuckman Teacher Feedback Form (TTFF) was introduced during the 1976-1977 phase of the study to add another dimension of observation. Tables 20 and 21 contain comparison data for the two groups for the three year period of use of the instrument. Again, no differences were noted across the groups or years in the study.

Comparison of B.S. and M.A. Data

Twenty-one graduates of the M.A. program were included in the 1978-79 phase of the application of the Tennessee Technological University Teacher Evaluation Model. The purpose of this section is to present the data accumulated by application of the various instruments and to show comparisons with the results of the application of the model to the B.S. graduates. The mean overall quality point average for the subjects' (achieved during their graduate programs) was 3.70 with a standard deviation of 0.28. This compared favorably with the quality point average of 3.76 (SD=.25) achieved by the 23 M.A. graduates who participated in the study during 1977-1978. The mean score achieved by 12 of the graduates on the Weighted Commons Examination of the NTE was 600 (SD=75.6). It should be noted that the graduates completed the test during their senior year in college. The F-Scale score for the M.A. graduates was 103.6 (SD=11.6) indicating that the graduates tended to be more authoritarian in their beliefs than the B.S. subjects.

Principal Ratings

Table 22 shows a comparison of the principal ratings of the B.S. and M.A. graduates by teaching level. In general, the ratings attained by the M.A. graduates were slightly higher than for the B.S. graduates. Significant positive correlations (Table 7) were noted between the principals' ratings and the student ratings of the subjects in the area of Democratic Procedure. No explanation can be offered for these correlations. Appropriateness of assignments was also correlated significantly with the Lecture Total teaching ratio from the application of interaction analysis and negatively with the first factor from the COR.

Student Evaluation of Teaching

Table 23 shows comparison data for application of the SET-I. It will be noted that no individual at the M.A. level were teaching in grades 4-6. In general M.A. subjects were rated higher by their students than were B.S. subjects. Significant positive correlations were noted between the Lively and Interesting factor of the SET-I and all factors of the COR and the Organized Demeanor factor from the TTFF.

Table 24 shows comparison data of the application of the SET-II in the classrooms of both B.S. and M.A. subjects. In general, M.A. subjects

TABLE 20

COMPARISON OF TUCKMAN RATINGS FOR FIRST YEAR ELEMENTARY TEACHERS (1976-1978)

FACTOR	1976 (N=12) $\bar{X}$	1976 (N=12) SD	1977 (N=10) $\bar{X}$	1977 (N=10) SD	1978 (N=18) $\bar{X}$	1978 (N=18) SD
I CREATIVITY	21.7	4.5	32.7	9.2	26.8	4.4
II DYNAMISM (DOMINANCE OF ENERGY)	22.9	7.2	31.4	7.4	30.2	4.6
III ORGANIZED DEMEANOR (ORGANIZATION AND CONTROL)	31.0	7.4	36.3	7.1	33.0	4.4
IV WARMTH AND ACCEPTANCE	27.9	6.8	39.8	5.6	32.0	3.7

TABLE 21

COMPARISON OF TUCKMAN RATINGS FOR FIRST YEAR SECONDARY TEACHERS (1976-1978)

FACTOR	1976 (N=3) $\bar{X}$	1976 (N=3) SD	1977 (N=11) $\bar{X}$	1977 (N=11) SD	1978 (N=6) $\bar{X}$	1978 (N=6) SD
I CREATIVITY	36.3	5.5	30.1	6.2	26.7	3.6
II DYNAMISN (DOMINANCE OF ENERGY)	32.0	9.2	32.7	4.9	31.0	5.4
III ORGANIZED DEMEANOR (ORGANIZATIONAL AND CONTROL)	38.7	4.0	36.5	3.3	29.7	5.4
IV WARMTH AND ACCEPTANCE	40.7	2.5	39.0	2.8	34.5	2.6

TABLE 22

COMPARISON OF PRINCIPAL RATINGS OF 1978 B.S. and M.A. GRADUATES

FACTOR	B.S. ELEM. (N=14)		M.A. ELEM. (N=5)		B.S. SEC. (N=3)		M.A. SEC. (N=9)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I SUBJECT MATTER COMPETENCE	4.5	0.6	4.6	0.5	4.0	1.0	4.6	0.7
II RELATIONS WITH STUDENTS	4.4	0.9	4.8	0.4	4.7	0.6	4.4	1.0
III APPROPRIATENESS OF ASSIGNMENTS	4.3	1.1	4.0	0.0	4.0	1.0	4.6	0.9
IV OVERALL EFFECTIVENESS	4.4	0.7	4.5	0.6	4.0	1.0	4.6	1.0

TABLE 23

COMPARISON OF SET-I SCORES FOR 1978 B.S. AND M.A. GRADUATES

FACTOR	B.S. ELEM. (N=8)		M.A. ELEM. (N=0)		B.S. SEC. (N=6)		M.A. SEC. (N=12)	
I FRIENDLY AND CHEERFUL	334.6	46.3	-	-	338.8	31.8	334.6	33.8
II KNOWLEDGEABLE AND POISED	355.4	26.9	-	-	299.8	39.9	358.8	16.7
III LIVELY AND INTERESTING	301.0	39.7	-	-	272.8	67.2	287.3	41.8
IV FIRM CONTROL (DISCIPLINE)	311.1	35.6	-	-	246.0	40.8	305.3	25.4
V NON-DIRECTIVE (DEMOCRATIC PROCEDURE)	285.0	40.8	-	-	204.3	40.6	247.3	40.4
COMPOSITE SCORE	317.4	28.9	-	-	263.5	31.7	306.8	23.6

TABLE 24

COMPARISON OF SET-II SCORES FOR 1978 B.S. AND M.A. GRADUATES

FACTOR	B.S. ELEM. (N=12) $\bar{X}$	B.S. ELEM. (N=12) SD	M.A. ELEM. (N=6) $\bar{X}$	M.A. ELEM. (N=6) SD
I RAPPORT	5.45	1.78	5.51	0.47
II INTERACTIONAL COMPETENCE	4.87	1.00	4.90	0.94
III STIMULATING, INTERACTION STYLE (COMBINATION OF RAPPORT AND INTERACTIONAL COMPETENCE	10.92	2.34	10.40	1.36
IV UNREASONABLE NEGATIVITY	8.06	1.55	8.10	0.67
V FOSTERANCE OF SELF-ESTEEM	6.94	0.65	7.21	0.82

TABLE 25

COMPARISON OF COR FACTOR SCORES FOR 1978 B.S. AND M.A. GRADUATES

RATIO	B.S. ELEM. (N=19) $\bar{X}$	B.S. ELEM. (N=19) SD	M.A. ELEM. (N=6) $\bar{X}$	M.A. ELEM. (N=6) SD	B.S. SEC. (N=6) $\bar{X}$	B.S. SEC. (N=6) SD	M.A. SEC. (N=12) $\bar{X}$	M.A. SEC. (N=12) SD
I/D	1.01	1.11	1.44	1.67	1.37	1.44	2.21	2.14
i/d	0.73	0.51	0.88	0.97	0.54	1.03	0.30	0.18
ST/TT	0.54	0.25	0.64	0.32	0.49	0.19	0.44	0.25
Sil/Tot	0.41	0.20	0.28	0.18	0.36	0.25	0.31	0.25
Lec/Tot	0.42	0.15	0.28	0.11	0.59	0.38	0.70	1.17

were rated slightly higher than B.S. subjects. Correlational data was omitted from the study because of sample size.

Interaction Analysis

Results of the application of interaction analysis is shown in Table 25. In general, M.A. subjects were using more indirect than direct teaching in comparison with B.S. subjects. There appeared to be more student talk in the M.A. classrooms of elementary teachers than in the classrooms of B.S. level subjects. Other ratio differences are in the predicted direction, i.e., in favor of the M.A. subjects. The silence to total teaching ratio correlated significantly with the factors from the COR and the Warmth and Acceptance factor of the TTFF.

Classroom Observation Record

The results of the application of the COR are shown in Table 26. Again the results indicated that the subjects who had achieved the M.A. were functioning at a slightly higher level, although the differences were not significant. Data from the COR were highly correlated with data from the TTFF.

Tuckman Teacher Feedback Form

Table 27 shows the data collected by use of the TTFF. In general, M.A. level subjects were rated higher than B.S. level subjects.

Summary

In summary, this chapter contains an overview of the results of the sixth year of the application of the Tennessee Technological University Teacher Evaluation Model to 1978 graduates of the teacher preparation programs. This chapter also contains a comparison of data across five years for those first year B.S. subjects for the period 1974 through 1978. Comparison across years and by level (elementary and secondary) indicated few differences in mean scores. Information for the secondary groups tended to be somewhat erratic due to the small sample sized. Career base line data indicated few differences across the five years of the study for the 1974 through 1978 graduates. In general, the principals rated the subjects quite highly in such areas as ability to work with fellow teachers, ethical behavior, and knowledge of subject matter. Based on measures obtained with the California F-Scale, the subjects tended to be somewhat non-authoritarian in their beliefs. Employing interaction analysis and other classroom observation techniques, revealed that the subjects were using more indirect than direct teaching methods and were exhibiting many of the characteristics of good teachers as reported in the literature. Student ratings of the subjects indicated concerns in the areas of democratic procedure and discipline. Mean scores for the M.A. subjects were generally higher than for B.S. level subjects. In most cases the differences were not significant.

Reference

1. Ayers, Jerry B. Report 79-1. A Report of Three Surveys of the 1978 Graduates of the Teacher Preparation Programs of Tennessee Technological University, Cookeville, TN: Tennessee Technological University, College of Education, 1979. (mimeo.), 21 pp.

TABLE 26

COMPARISON OF COR FACTOR SCORES FOR 1978 B.S. AND M.A. GRADUATES

FACTOR	B.S. ELEM. (N=20)		M.A. ELEM. (N=6)		B.S. SEC. (N=6)		M.A. SEC. (N=12)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I	39.9	4.2	42.2	2.6	38.5	4.6	40.4	5.8
II	63.1	6.2	66.2	3.7	64.0	5.6	61.1	7.2
III	22.2	2.8	24.3	1.2	21.8	2.2	21.2	3.6

TABLE 27

COMPARISON OF TUCKMAN SCORES FOR 1978 B.S. AND M.A. GRADUATES

FACTOR		B.S. ELEM. (N=18)		M.A. ELEM. (N=6)		B.S. SEC. (N=6)		M.A. SEC. (N=12)	
		$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{S}$	SD
I	CREATIVITY	26.8	4.4	29.7	2.9	26.7	3.6	27.0	4.7
II	DYNAMISM (DOMINANCE OF ENERGY)	30.2	4.6	31.7	2.7	31.0	5.4	32.9	5.8
III	ORGANIZED DEMEANOR (ORGANIZATION AND CONTROL)	33.0	4.4	36.0	1.4	29.7	5.4	34.3	4.9
IV	WARMTH AND ACCEPTANCE	32.0	3.7	38.0	2.5	34.5	2.6	33.5	5.2

CHAPTER III

COMPARISON OF TWO GROUPS OF TEACHERS ACROSS FIVE YEARS

During the course of the operation of the Tennessee Technological University Teacher Evaluation Model, data have been collected about a number of variables. The purpose of this chapter is to present a brief summary of certain essential data that were collected over a five year period on two groups of graduates i.e., graduates who participated in the study from 1973 throuth 1978 and graduates who participated in the study from 1974 through 1979. The comparisons presented in this chapter are what were felt, to be essential in making decisions with regard to continuation and modification of the basic teacher evaluation model.

This chapter was divided into three major sections each corresponding to an instrument(s) used. These sections include principal evaluations, student evaluations and observation by independent observers. Each section is further subdivided into data by teaching level, i.e., elementary (grades K-6) and secondary (grades 7-12). It should be noted that in many cases attrition from the study resulted in relatively small sample sized in later years of the project and significant differences may be suspect. Throughout the course of data examination, the analysis of variance technique was employed using a year by teaching level design. Thus, teaching level and year of participation entered into the analysis. In general, few differences were found in years and by teaching level. The ANOVA tables were omitted from this report but are available from the Office of the Associate Dean.

Principal Evaluation of Subjects

Principal evaluations of the elementary subjects were shown in Tables 28 and 29. In general the mean ratings by the principals increased from the first to the third year and thereafter remained about constant. This was evident in both groups. This same pattern was evident for the ratings of secondary teachers (Tables 30 and 31). Two conclusions might be drawn from the data (1) the level of performance of the graduates, as measured by principal ratings was increasing or (2) subjects with poorer ratings were dropping out of the study or out of the teaching profession. These points will be investigated further.

Student Evaluation of Teaching

Tables 32 and 33 show comparisons across five years for data obtained by use of the Student Evaluation of Teaching-I in the classrooms of teachers in grades 4 through 6. In general, mean ratings of the teachers reached a high during the third or fourth year in the study and then began to drop. In part, this corresponds with the ratings given by principals. A similar pattern (Tables 34 and 35) was in evidence for teachers in grades 7-12. Basically there were no significant differences between the years in the study and also between the grade levels. Conclusions about the ratings might be drawn that were similar to those advanced for the ratings by the principals. Tables 36 and 37 show comparisons of data across five years for teachers in grades K through 3 using the Student Evaluation of Teaching-II. Again, similar patterns were in evidence for the various factors, i.e., higher ratings were noted in the third year.

TABLE 28

COMPARISON OF PRINCIPALS' RATINGS
OF ELEMENTARY TEACHERS ACROSS FIVE YEARS (1973-1977)

FACTORS	1973 (N=28)		1974 (N=18)		1975 (N=12)		1976 (N=10)		1977 (N=2)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I SUBJECT MATTER COMPETENCE	4.2	0.8	4.2	0.8	4.2	0.8	4.3	0.7	4.5	0.7
II RELATIONS WITH STUDENTS	4.3	0.8	4.3	0.8	4.3	1.0	4.7	0.5	5.0	0.0
III APPROPRIATENESS OF ASSIGNMENTS	4.3	0.7	4.1	0.7	4.3	0.9	4.4	0.5	5.0	0.0
IV OVERALL EFFECTIVENESS	4.2	0.7	4.3	0.8	4.3	0.8	4.6	0.5	4.5	0.7

TABLE 29

COMPARISON OF PRINCIPALS' RATINGS
OF ELEMENTARY TEACHERS ACROSS FIVE YEARS (1974-1978)

FACTORS	1974 (N=27)		1975 (N=16)		1976 (N=10)		1977 (N=8)		1978 (N=2)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I SUBJECT MATTER COMPETENCE	4.0	0.8	4.2	0.8	4.4	0.7	4.4	0.7	4.5	0.7
II RELATIONS WITH STUDENTS	4.1	0.7	4.2	1.0	4.4	0.8	4.6	0.7	5.0	0.0
III APPROPRIATENESS OF ASSIGNMENTS	4.2	0.9	4.1	0.8	4.4	0.7	4.5	0.8	5.0	0.0
IV OVERALL EFFECTIVENESS	4.0	0.8	4.3	0.8	4.2	0.8	4.4	1.1	4.5	0.7

TABLE 30

COMPARISON OF PRINCIPALS' RATINGS
OF SECONDARY TEACHERS ACROSS FIVE YEARS (1973-1977)

FACTOR	1973 (N=17)		1974 (N=11)		1975 (N=10)		1976 (N=4)		1977 (N=6)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I SUBJECT MATTER COMPETENCE	4.0	0.7	4.0	0.6	4.2	0.6	4.0	0.0	4.3	0.5
II RELATIONS WITH STUDENTS	3.9	0.8	3.6	1.1	4.0	0.7	4.8	0.5	4.3	0.8
III APPROPRIATENESS OF ASSIGNMENTS	3.9	0.7	3.7	0.7	4.5	0.5	4.0	0.0	4.0	0.6
IV OVERALL EFFECTIVENESS	4.0	0.6	3.6	0.7	4.0	0.8	4.0	0.0	4.2	0.4

TABLE 31

COMPARISON OF PRINCIPALS' RATINGS
OF SECONDARY TEACHERS ACROSS FIVE YEARS (1974-1978)

FACTOR	1974 (N=1)		1975 (N=2)		1976 (N=2)		1977 (N=0)		1978 (N=0)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I SUBJECT MATTER COMPETENCE	4.0	0.0	4.5	0.7	4.5	0.7	-	-	-	-
II RELATIONS WITH STUDENTS	4.0	0.0	4.0	0.0	4.0	1.4	-	-	-	-
III APPROPRIATENESS OF ASSIGNMENTS	5.0	0.0	4.0	0.0	4.0	1.4	-	-	-	-
IV OVERALL EFFECTIVENESS	5.0	0.0	4.0	0.0	4.0	1.4	-	-	-	-

TABLE 32

COMPARISON OF SET-I SCORES
FOR ELEMENTARY TEACHERS ACROSS FIVE YEARS (1973-1977)

FACTOR	1973 (N=12) $\bar{X}$	1973 (N=12) SD	1974 (N=8) $\bar{X}$	1974 (N=8) SD	1975 (N=6) $\bar{X}$	1975 (N=6) SD	1976 (N=4) $\bar{X}$	1976 (N=4) SD	1977 (N=3) $\bar{X}$	1977 (N=3) SD
I FRIENDLY AND CHEERFUL	341.1	40.6	332.3	47.7	334.8	39.5	311.8	50.3	307.3	34.6
II KNOWLEDGEABLE AND POISED	341.0	48.2	333.8	32.6	351.5	25.5	329.3	32.6	336.3	19.0
III LIVELY AND INTERESTING	303.3	56.1	267.0	47.3	281.3	58.4	270.3	46.5	293.0	37.6
IV FIRM CONTROL	332.8	32.9	313.3	35.1	304.3	28.5	296.8	20.1	270.7	48.8
V NON-DIRECTIVE (DEMOCRATIC PROCEDURE)	233.8	38.5	214.6	52.8	266.3	48.6	214.8	13.7	255.3	54.2
COMPOSITE SCORE	315.8	23.9	302.8	41.0	303.0	28.6	284.3	24.8	292.7	19.5

TABLE 33

COMPARISON OF SET-I SCORES
FOR ELEMENTARY TEACHERS ACROSS FIVE YEARS (1974-1978)

FACTOR	1974 (N=8) $\bar{X}$	1974 (N=8) SD	1975 (N=6) $\bar{X}$	1975 (N=6) SD	1976 (N=6) $\bar{X}$	1976 (N=6) SD	1977 (N=6) $\bar{X}$	1977 (N=6) SD	1978 (N=3) $\bar{X}$	1978 (N=3) SD
I FRIENDLY AND CHEERFUL	325.3	48.2	344.3	37.8	342.3	38.4	332.0	78.4	307.3	34.6
II KNOWLEDGEABLE AND POISED	322.4	43.5	365.7	15.6	352.5	16.9	346.8	28.5	336.3	19.0
III LIVELY AND INTERESTING	315.6	40.4	297.2	34.7	322.8	32.6	353.2	12.8	293.0	37.6
IV FIRM CONTROL (DISCIPLINE)	305.4	38.7	315.0	42.6	327.2	16.6	317.2	60.8	270.7	48.8
V NON-DIRECTIVE (DEMOCRATIC PROCEDURE)	255.9	40.8	283.2	47.0	279.7	45.1	283.0	38.8	255.3	54.2
COMPOSITE SCORE	304.6	19.0	321.2	23.4	325.8	25.9	323.0	32.0	292.7	19.5

TABLE 34

COMPARISON OF SET-I SCORES
FOR SECONDARY TEACHERS ACROSS FIVE YEARS (1973-1977)

FACTOR	1973 (N=13)		1974 (N=12)		1975 (N=10)		1976 (N=4)		1977 (N=6)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I FRIENDLY AND CHEERFUL	347.6	51.6	339.6	47.5	331.9	48.6	305.5	100.3	311.1	77.2
II KNOWLEDGEABLE AND POISED	351.8	27.1	344.3	35.3	359.8	24.5	354.5	22.1	331.2	37.8
III LIVELY AND INTERESTING	310.6	72.1	299.3	69.1	304.6	53.4	315.5	66.6	277.5	86.2
IV FIRM CONTROL (DISCIPLINE)	282.4	24.4	286.4	35.3	297.0	32.2	277.5	30.6	294.3	32.3
V NON-DIRECTIVE (DEMOCRATIC PROCEDURE)	276.3	41.7	268.7	56.6	269.1	43.9	274.5	66.5	259.0	63.0
COMPOSITE SCORE	315.3	34.6	308.3	35.8	312.5	43.9	305.5	51.9	294.7	49.9

TABLE 35

COMPARISON OF SET-I SCORES
FOR SECONDARY TEACHERS ACROSS FIVE YEARS (1974-1978)

FACTOR	1974 (N=1)		1975 (N=2)		1976 (N=2)		1977 (N=0)		1978 (N=0)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I FRIENDLY AND CHEERFUL	219.0	0.0	332.0	7.1	296.5	41.7	-	-	-	-
II KNOWLEDGEABLE AND POISED	370.0	0.0	349.5	3.5	337.0	46.7	-	-	-	-
III LIVELY AND INTERESTING	292.0	0.0	325.5	21.9	286.0	94.8	-	-	-	-
IV FIRM CONTROL (DISCIPLINE)	398.0	0.0	336.0	17.0	310.0	36.8	-	-	-	-
V NON-DIRECTIVE (DEMOCRATIC PROCEDURE)	170.0	0.0	238.0	66.5	214.5	27.6	-	-	-	-
COMPOSITE SCORE	280.0	0.0	316.0	9.9	289.0	24.0	-	-	-	-

TABLE 36

COMPARISON OF SET-II SCORES
FOR ELEMENTARY TEACHERS ACROSS FIVE YEARS (1973-1977)

FACTOR	1973 (N=0)		1974 (N=9)		1975 (N=7)		1976 (N=8)		1977 (N=2)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I RAPPORT	-	-	5.06	1.56	5.76	0.52	5.27	0.69	5.05	7.1
II INTERACTIONAL COMPETENCE	-	-	3.94	1.14	4.52	0.37	4.70	0.34	4.07	3.5
III STIMULATING INTERACTION STYLE (COMBINATION OF RAPPORT AND INTERACTIONAL COMPETENCE)	-	-	9.04	2.65	10.24	0.85	9.98	0.81	9.12	1.1
IV UNREASONABLE NEGATIVITY	-	-	7.20	1.78	8.10	1.06	8.03	0.92	9.63	1.6
V FOSTERANCE OF SELF-ESTEEM	-	-	6.50	0.54	7.03	0.81	7.00	0.80	5.84	6.2

TABLE 37

COMPARISON OF SET-II SCORES
FOR ELEMENTARY TEACHERS ACROSS FIVE YEARS (1974-1978)

FACTOR	1974 (N=20)		1975 (N=8)		1976 (N=6)		1977 (N=2)		1978 (N=2)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I RAPPORT	5.14	1.70	5.63	0.32	5.46	0.35	5.09	0.12	5.05	0.70
II INTERACTIONAL COMPETENCE	5.35	2.81	4.32	1.61	4.63	0.35	4.34	0.49	4.07	0.35
III STIMULATING INTERACTION STYLE (COMBINATION OF RAPPORT AND INTERACTIONAL COMPETENCE)	9.54	2.54	10.41	0.49	10.09	0.68	9.43	0.61	9.13	0.10
IV UNREASONABLE NEGATIVITY	8.06	2.07	9.17	0.61	8.50	3.40	7.06	2.91	9.64	0.16
V FOSTERANCE OF SELF-ESTEEM	6.49	1.77	7.28	0.27	6.00	1.15	6.38	0.53	5.85	0.62

Observational Instruments

Three observational instruments were completed by specially trained graduate assistants. This section of the report is subdivided into three sections corresponding to the instruments used (1) Interaction Analysis, (2) the Classroom Observation Record and (3) the Tuckman Teacher Feedback Form.

Interaction Analysis

Tables 38 and 39 shows comparison of the interaction analysis data collected over two five year periods for elementary subjects. In general, both groups showed increases from the first to the third year of teaching in the indirect to direct teaching ratios. Thereafter the ratios remained at about the same level. Student talk to teacher talk ratios and lecture to total teaching ratios remained about constant across the two five year periods. However the silence to total teaching ratio varied greatly across the five year periods for both groups. There was no pattern evident.

The various ratios for the two secondary groups (Tables 40 and 41) were very irratic and there were no patterns in evidence. This may be due in part to the small number of cases in both five year periods. It will be noted that in the case of 1974 graduates, all subjects had dropped out of the study or teaching after the third year.

Classroom Observation Record

Tables 42 and 43 show comparisons of the data gathered on the elementary teachers using the Classroom Observation Record. In general, the subjects received higher ratings in their third year of teaching on Factors I and II. Ratings on Factor III (pupil behavior) remained about constant. Again, this pattern is similar to that reported for data gathered by use of principal student ratings and by use of interaction analysis. Tables 44 and 45 show the data for the secondary groups. A pattern similar to the elementary subjects was in evidence.

Tuckman Teacher Feedback Form

The Tuckman Teacher Feedback Form was introduced into the study in 1976. Therefore, data were available for only two years for the 1973-1977 group and three years for the 1974-1978 group. Tables 46 and 47 show data for the elementary groups and tables 48 and 49 show data for the secondary groups. There is some evidence that would lead to the conclusion that mean scores may have been higher in the third or fourth year of the study than at other times. This is similar to the pattern reported in the other observational instrument.

Summary

In summary, this chapter has presented comparisons of pertinent data across five years for two groups of subjects, i.e., those who entered the

TABLE 38

COMPARISON OF RATIOS FROM INTERACTION ANALYSIS
FOR ELEMENTARY TEACHERS ACROSS FIVE YEARS (1973-1977)

1973 (N=29)		1979 (N=16)		1975 (N=13)		1976 (N=10)		1977 (N=5)	
$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
1.30	1.13	1.34	0.70	1.23	0.97	4.23	4.30	1.91	0.83
0.91	0.69	0.81	0.31	0.56	0.36	0.93	0.65	0.91	0.63
0.66	0.65	0.44	0.21	0.47	0.28	0.89	1.49	0.47	0.47
0.54	1.14	0.31	0.19	0.39	0.28	0.17	0.27	0.68	1.01
0.41	0.14	0.40	0.13	0.53	0.18	0.43	0.26	0.32	0.21

TABLE 39

COMPARISON OF RATIOS FROM INTERACTION ANALYSIS
FOR ELEMENTARY TEACHERS ACROSS FIVE YEARS (1974-1978)

1974 (N=28)		1975 (N=16)		1976 (N=10)		1977 (N=8)		1978 (N=5)	
$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
1.40	2.04	1.92	3.20	3.92	4.87	0.78	0.42	3.01	3.01
0.69	0.46	0.83	0.50	1.09	0.96	0.75	0.28	0.90	0.63
0.81	1.23	0.98	1.23	0.56	0.27	0.80	0.47	0.35	4.70
0.53	0.80	0.41	0.33	0.64	1.64	0.34	0.17	0.68	1.01
0.38	0.14	0.42	0.13	0.38	0.12	0.30	0.10	0.32	0.21

TABLE 40

COMPARISON OF RATIOS FROM INTERACTION ANALYSIS
FOR SECONDARY TEACHERS ACROSS FIVE YEARS (1973-1977)

RATIO	1973 (N=13)		1974 (N=12)		1975 (N=11)		1976 (N=3)		1977 (N=6)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I/D	2.47	3.12	1.81	1.35	1.43	1.38	1.00	1.73	2.14	3.26
i/d	0.60	0.91	0.60	0.35	0.41	0.26	0.54	0.09	0.99	1.30
ST/TT	0.45	0.35	0.64	0.48	0.31	0.11	0.43	0.36	0.48	0.20
Sil/Tot	0.31	0.27	0.35	0.49	0.29	0.25	0.24	0.33	0.29	0.18
Lec/Tot	0.63	0.21	0.50	0.19	0.62	0.12	0.63	0.03	0.40	0.28

TABLE 41

COMPARISON OF RATIOS FROM INTERACTION ANALYSIS
FOR SECONDARY TEACHERS ACROSS FIVE YEARS (1974-1978)

RATIO	1974 (N=2)		1975 (N=2)		1976 (N=2)		1977 (N=0)		1978 (N=0)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I/D	0.53	0.24	0.68	0.28	0.63	0.49	-	-	-	-
i/d	0.24	0.31	0.57	0.14	0.74	0.03	-	-	-	-
ST/TT	0.40	0.42	0.88	0.87	0.65	0.31	-	-	-	-
Sil/Tot	0.22	0.23	1.08	0.84	0.27	0.31	-	-	-	-
Lec/Tot	0.63	0.49	0.40	0.71	1.08	0.98	-	-	-	-

TABLE 42

COMPARISON OF COR FACTORS FOR ELEMENTARY TEACHERS ACROSS FIVE YEARS (1973-1977)

	1973 (N-29)		1974 (N=16)		1975 (N=13)		1976 (N=10)		1977 (N=5)	
FACTOR	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I	43.6	2.8	44.0	2.6	45.0	2.7	44.2	2.9	38.6	7.6
II	63.4	6.3	62.6	4.5	63.0	4.4	62.2	4.9	60.0	4.5
III	24.0	2.3	23.9	2.4	24.4	1.9	24.1	2.0	24.0	1.6

TABLE 43

COMPARISON OF COR FACTORS FOR ELEMENTARY TEACHERS ACROSS FIVE YEARS (1974-1978)

	1974 (N=28)		1975 (N=16)		1976 (N=13)		1977 (N=9)		1978 (N=5)	
FACTOR	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I	44.3	2.7	45.3	2.8	45.2	2.6	44.4	2.5	46.6	7.6
II	66.9	4.3	67.2	7.9	67.0	5.6	67.1	4.4	62.0	4.4
III	24.2	2.3	24.4	2.5	24.5	2.8	24.6	1.8	24.0	1.6

TABLE 44

COMPARISON OF COR FACTORS FOR SECONDARY TEACHERS ACROSS FIVE YEARS (1973-1977)

	1973 (N=13)		1974 (N=12)		1975 (N=11)		1976 (N=5)		1977 (N=6)	
FACTOR	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I	39.2	5.3	37.6	6.3	43.6	4.4	44.2	7.1	38.2	7.6
II	59.8	6.8	56.3	9.9	65.9	6.4	69.6	5.1	61.0	9.9
III	21.0	3.0	19.3	4.0	22.4	1.7	21.8	2.8	21.3	5.3

TABLE 45

COMPARISON OF COR FACTORS FOR SECONDARY TEACHERS ACROSS FIVE YEARS (1974-1978)

FACTOR	1974 (N=2)		1975 (N=2)		1976 (N=2)		1977 (N=0)		1978 (N=0)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I	39.0	9.9	40.5	10.6	34.0	1.4	-	-	-	-
II	56.0	17.0	64.5	16.3	63.6	10.3	-	-	-	-
III	19.5	3.5	23.0	4.2	20.5	2.1	-	-	-	-

TABLE 46

COMPARISON OF TUCKMAN RATINGS FOR ELEMENTARY TEACHERS WHO ENTERED STUDY IN 1973

FACTOR	1976 (N=9)		1977 (N=2)	
	$\bar{X}$	SD	$\bar{X}$	SD
I CREATIVITY	26.8	7.6	29.8	8.9
II DYNAMISM (DOMINANCE OF ENERGY)	27.6	6.9	32.0	2.9
III ORGANIZED DEMEANOR (ORGANIZATION AND CONTROL)	34.1	4.5	32.6	3.2
IV WARMTH AND ACCEPTANCE	31.0	7.9	32.0	8.4

TABLE 47

COMPARISON OF TUCKMAN RATINGS FOR ELEMENTARY TEACHERS WHO ENTERED STUDY IN 1974

FACTOR	1976 (N=6)		1977 (N=8)		1978 (N=2)	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
I CREATIVITY	28.5	6.2	25.4	6.9	29.8	8.9
II DYNAMISM (DOMINANCE OF ENERGY)	26.3	3.0	27.3	7.9	32.0	2.9
III ORGANIZED DEMEANOR (ORGANIZATION AND CONTROL)	35.7	6.4	36.5	4.1	32.6	3.2
IV WARMTH AND ACCEPTANCE	38.3	6.3	36.6	4.3	32.0	8.4

TABLE 48

COMPARISON OF TUCKMAN RATINGS FOR
SECONDARY TEACHERS WHO ENTERED STUDY IN 1974

FACTOR	1976 (N=1) $\bar{X}$	SD	1977 (N=0) $\bar{X}$	SD	1978 (N=0) $\bar{X}$	SD
I CREATIVITY	25.0	0.0	-	-	-	-
II DYNAMISM (DOMINANCE OF ENERGY)	25.0	0.0	-	-	-	-
III ORGANIZED DEMEANOR (ORGANIZATION AND CONTROL)	28.0	0.0	-	-	-	-
IV WARMTH AND ACCEPTANCE	28.0	0.0	-	-	-	-

TABLE 49

COMPARISON OF TUCKMAN RATINGS FOR
SECONDARY TEACHERS WHO ENTERED STUDY IN 1973

FACTOR	1976 (N=5) $\bar{X}$	SD	1977 (N=6) $\bar{X}$	SD
I CREATIVITY	30.6	6.4	24.2	10.2
II DYNAMISM (DOMINANCE OF ENERGY)	29.6	5.4	31.7	5.7
III ORGANIZED DEMEANOR (ORGANIZATION AND CONTROL)	40.2	2.3	30.5	11.0
IV WARMTH AND ACCEPTANCE	37.0	6.1	31.3	9.3

study in 1973 and those who entered in 1974. In general, the patterns for the two groups were similar. Principal ratings for both elementary subjects reached a high in the third year and remained at about this same level through the fourth and fifth years. Student evaluations, in general, were highest for the teachers in their third or fourth year of the study. Observational data gathered through the use of interaction analysis, the Classroom Observation Record and the Tuckman Teacher Feedback Form, indicated that the subjects may have been functioning at their highest levels in the third or fourth year in the study. Use of the ANOVA technique indicated few differences across years in the study or teaching levels. Reasons for changes in the subjects across the five years of the study were advanced.

CHAPTER IV

NORMATIVE INFORMATION

During the course of the six years of the project, much data has been collected from a number of subjects. Actually, data werecollected from 270 individuals (from a total potential population of about 2600) or about ten percent of the graduates of the teacher preparation programs of the University during the period 1973 through 1978. Observations were made as many as five time on some individuals. Therefore, a total of as many as 450 observations were made with some instruments.

In order to help individuals improve their teaching and to provide additional information for the project, percentile norms have been developed on selected instruments. It is felt that this information will be of value to future researchers.

Table 50 contains normative information for the California F-Scales Forms 45 and 40, the Student Evaluation of Teaching-I and Student Evaluation of Teaching-II. Chapter II contains a listing of the names assigned to the factor numbers in the table. Table 51 shows similar information for the data collected relative to the Tuckman Teacher Feedback Form, the Flanders Interaction Analysis, and the Classroom Observation Record.

TABLE 50

NORM DATA (PERCENTILES, MEANS, SD, RANGE) FOR F-SCALE AND STUDENT EVALUATION OF TEACHING

PERCENTILE	F-SCALE	SET-I						SET-II				
		I	II	III	IV	V	TOT	I	II	III	IV	V
10	73	271	301	233	250	188	265	5.00	4.00	9.00	5.00	5.60
20	83	294	320	254	271	208	280	5.04	4.07	9.18	7.16	6.02
30	89	320	329	272	281	224	291	5.18	4.20	9.44	7.59	6.32
40	94	330	337	290	288	239	298	5.30	4.37	9.68	7.95	6.53
50	100	340	345	304	296	252	306	5.42	4.50	10.00	8.31	6.74
60	106	350	352	317	307	266	313	5.62	4.65	10.31	8.65	6.92
70	111	360	359	328	316	282	322	5.80	4.76	10.60	9.00	7.14
80	119	371	365	339	328	300	330	6.04	4.96	10.85	9.26	7.39
90	125	382	376	357	348	322	344	6.33	5.15	11.15	9.50	7.91
N	426	277	277	277	277	277	277	161.00	159.00	161.00	161.00	160.00
$\bar{X}$	100	332.4	340.4	295.8	297.7	253.1	304.8	5.46	4.47	9.86	7.91	6.64
SD	21	46.3	33.2	51.3	41.5	51.3	32.5	0.95	0.78	1.76	1.67	1.25
MIN	47	118	147	115	110	133	185	0.29	0.40	0.34	0.14	0.20
MAX	177	400	400	400	400	400	400	9.28	6.78	16.07	9.83	9.33

TABLE 51

NORM DATA (PERCENTILES, MEANS, SD, RANGE) FOR OBSERVATION INSTRUMENT

	TUCKMAN				FLANDER'S INTERACTION ANALYSIS					CLASSROOM OBSERVATION RECORD FACTORS		
PERCENTILE	I	II	III	IV	I/D	i/d	ST/TT	Sil/Tot	Lec/Tot	I	II	III
10	21	21	29	27	0.18	0.19	0.20	0.06	0.17	32	50	17
20	22	23	30	30	0.37	0.31	0.30	0.10	0.25	36	56	20
30	25	25	32	33	0.52	0.41	0.36	0.15	0.31	39	60	21
40	26	27	34	35	0.75	0.50	0.41	0.19	0.37	41	63	22
50	29	30	35	36	0.99	0.67	0.47	0.24	0.43	42	65	23
60	31	32	36	38	1.30	0.79	0.56	0.30	0.50	44	68	24
70	34	34	37	40	1.63	0.98	0.62	0.38	0.56	45	69	25
80	36	36	39	42	2.31	1.25	0.75	0.49	0.63	47	72	26
90	38	36	42	43	4.08	1.93	0.98	0.75	0.73	48	74	27
N	194	207	218	219	430.00	444.00	442.00	446.00	447.00	464.00	457	465
X	29.2	29.2	34.7	35.7	1.62	0.92	0.63	0.37	0.45	41.1	63.4	22.3
SD	6.4	6.1	4.9	5.7	1.89	1.05	0.69	0.58	0.28	6.7	9.9	4.0
MIN	19	19	20	20	0.00	0.10	0.04	0.01	0.00	1.3	23	6
MAX	43	42	43	43	9.50	9.00	1.06	1.03	3.76	49.00	77	28

CHAPTER V

SUMMARY, CONCLUSIONS, RECOMMENDATIONS AND FUTURE PLANS

The objectives of Chapter V were fourfold: (1) presentation of a brief summary of the total evaluation study that was conducted in 1978-1979; (2) summarize the major conclusions of the study; (3) present recommendations based on the conclusions of the study; and (4) provide a summary of the plans for the continuation of the study during 1979-1980.

Summary

Five groups of subjects (graduates of the teacher preparation program of Tennessee Technological University) were used in the study as follows: (1) 1974, 11; (2) 1975, 13; (3) 1976. 11; (4) 1978, 27; and (5) 1978, 57 (including 21 M.A. and 36 B.S. graduates). Detailed data were collected on each subject by use of standardized instruments and specially constructed questionnaires administered by trained graduate research assistants. Also personal data about each graduate was collected from University records. Basic instrumentation and procedures for the study were pilot tested during the first year and have remained virtually unchanged. The current year included: (1) University permanent records and transcript information; (2) principals' evaluation of each subject by the use of two different instruments; (3) administration of the California F-Scale (only to those subjects who were participating in the study for the first time) to measure individual prejudices and anti-democratic tendencies; (4) administration of the Classroom Observation Record and the Tuckman Teacher Feedback Form; (5) administration of one form of the Student Evaluation of Teaching to the students of the subjects; and (6) a ten category interaction analysis system to record observed classroom behavior. All data obtained in the study were classified, coded, and key punched for analyses. Descriptive statistics, intercorrelations and comparisons were computed. The major findings of the study were divided into three major parts, e.g., first year subjects, comparisons of first year subjects, and comparison across years for two groups of subjects.

The major findings of the study for the first year subjects (1978 graduates) were similar to those reported in the first five years of the study. Comparisons made between the B.S. and M.A. individuals indicated few significant differences. Therefore, no detailed explanation of the findings will be given at this point (see Chapter II). Comparisons across years for all first year subjects in the project indicated few differences as did comparisons for subjects who had been in the study five years. The differences that were noted were minor and in most cases no explanation can be offered for the changes. However, the subjects appeared to have higher scores on most instruments during their third year in the study. In summary, it appeared that the subjects who had been in the study for more than one year had changed little. Also it appeared that those subjects who entered the study in 1978 were little different from their counterparts that were in the initial year (1973-1974) of the project.

Based on the findings of the study, several conclusions were advanced and recommendations made for continuation of the study. These follow in the next three sections.

Conclusions

Following are the major conclusions of the study based on the findings. It should be noted that additional analyses of the data are planned that may make additional conclusions warranted. This section is divided into three parts: Use of the Evaluation Model, Evaluation of Graduates During 1978-1979, and Comparisons of Data Across Time.

Use of the Evaluation Model

1. The plan of evaluation outlined in this report appeared to be useful in gathering information for modifying and improving the programs of teacher education at Tennessee Technological University.

2. Instrumentation employed in the study appeared to be valid and provided essential information with regard to the graduates of the teacher education programs.

3. Modifications can be made in the original model that can lead to more valid and useful information for an institution wishing to replicate the plan of evaluation.

4. Some problems have resulted in the collection and analyses of data because of the attrition of subjects from the study. Additional attrition in the future may make it difficult to draw valid and reliable conclusions. Consideration ought to be given to the following subjects for only three years.

5. Better and more refined methods are needed for training of the graduate assistants in the use of the various observation instruments. It was felt that some of the significant differences that were noted in the study may have been due to unreliable observations.

Evaluation of Graduates During 1978-1979

1. The pupils of more experienced teachers appeared to be more alert, initiating, and resourceful in the classroom activities.

2. Subjects with greater experience in the classroom appeared to be more fair, democratic, alert, and have a broader base of behavior than the less experienced teachers.

3. Students of subjects in the upper grades felt that the teachers did not exercise enough control in the classroom.

4. As perceived by students, the teachers in the upper grades were more directive in the instructional activities than teachers in the lower grades.

5. Subjects at higher grade levels were using significantly more lecture in the classroom than teachers in the lower grades.

6. Subjects with higher quality point averages in education and psychology courses had better relations with students and were in general more friendly and cheerful, knowledgeable and poised, and non-directive in their teaching.

7. Subjects who achieved higher quality point averages in their major teaching fields tended to be more authroitarian oriented than subjects who achieved at a lower level. This was probably due in part to the fact that the large majority of the subjects were teaching in the upper grades where less democratic and more authoritarian teaching methods were used or the subjects were attempting to complete a specified unit or curriculum.

8. Overall scores achieved by the subjects on the National Teacher Examinations placed the individuals at approximately the 50th percentile which is comparable with other groups that have been studied.

9. Ratings of various aspects of the teacher preparation program of the University by the subjects were similar to that of other groups of individuals.

10. In general, principals' ratings of the subjects were high. However, it should be pointed out that principals rated the subjects somewhat lower in their knowledge and understanding of the sciences and mathematics, lacking effective use of community resources, handling disciplinary problems, and insight into characteristics of behavior. Highest ratings of the subjects were noted in the areas of ability to work with and attitudes toward colleagues, ethical behavior, understanding the goals of the school, and cooperation and dependability.

11. There was a positive correlation between the principals' ratings and various items on the Classroom Observation Record and the Student Evaluation of Teaching. Based on the principals' observation,(it appeared that) the subjects in this study possessed many of the characteristics of good teachers as reported in the literature.

12. The subjects of this study appeared to be more non-authoritarian than authoritarian as measured by the California F-Scale. There were no significant differences in scores achieved by the subjects when examined on the basis of grade level or years of experience in the classroom. These findings are to some degree contrary to findings of other studies reported in the literature.

13. Based on student observations, the subjects were highly knowledgeable and poised; and on the negative side,the students perceived the subjects as being more directive than non-directive as measured by the Student Evaluation of Teaching.

14. The subjects in the study appeared to be using more indirect than direct teaching methods in their classrooms. Indirect-direct ratios based on the interaction analysis system used were higher than for comparable groups.

er ratios computed from the interaction analysis observations were parable to those reported in the literature.

y of the characteristics, reported in the literature, of good teachers e noted as a result of the administration of the Classroom Observation ord.

re appeared to be few significant differences between B.S. and M.A. el 1978 graduates. However, M.A. graduates generally received higher n scores than B.S. level graduates.

general, the subjects of this study possessed many of the characteristics teachers as reported in the literature. As might be expected, it was lt to identify specific problems. Principals praised the subjects as ir students. However, it must be kept in mind that the subjects who par- ed in this study were volunteers. Therefore, some bias was introduced e total study that may make some of the conclusions invalid when applied total population of graduates.

sons of Data Across Time

parisons of first year B.S. data by level (elementary and secondary) icated few significant differences across the period 1974-1978. Sub- ts who entered the study at both the elementary or secondary level in 4, 1975, 1976, 1977 or 1978 appeared to be very similar in their first r of teaching.

parisons of two groups of subjects by teaching level across time (1973- 7 and 1974-1978) indicated similar results for both groups. In general, subjects appeared to achieve their highest ratings in their third or rth year. The data may be suspect due to the high attrition from the dy after the third year. This pattern was evident for both the elemen- y and secondary subjects.

attempt was made to compare the results of the application of the model individuals who received the M.A. and were participating in the study. was estimated that there will be a sufficient sample size to carry out parisons after 1979-1980.

summary, the results of the study lead to the conclusions that (1) first achers have changed little during the period since the initiation of the and (2) teachers may be reaching their optium level of performance in the r fourth year after entering the profession.

Recommendations

ed on the conclusions of the study, it is felt that the following recom- lons were warranted. These recommendations centered largely around the ation and modification of the study outlined in this report. It was the reader to make recommendations relative to his individual problems cerns and toward needed changes in the teacher education program of the tion.

1. The plan outlined in this report should be replicated during 1979-1980 adding another group of subjects who completed the B.S. or M.A. requirements in 1979.

2. Continuing contact should be maintained with other institutions and agencies pursuing similar projects and the literature related to teacher evaluation should be continuously monitored.

3. Consideration will be given to the use of other instruments to gather data as they become available.

4. Further analyses of the data should be made employing more sophisticated statistical techniques such as factor analysis and discriminate analysis.

5. Faculty of the institution and other individuals should be encouraged to review the report and to request additional data analyses to fit their individual needs.

6. Better methods should be developed to optimize the participation of subjects in the study.

7. Faculty and administrators should be encouraged to make more effective use of the data that have been collected and to request additional information about points of interest.

8. A more extensive data bank of information on all students in the teacher education programs should be established. Thereafter, a more meaningful study can be made in relation to predicting the success of graduates in teaching.

9. Work should continue on the development of other phases of the total evaluation project, i.e., instrumentation for use with Ed.S. level graduates and for those individuals in such fields as administration, supervision and counseling.

Plans for the Continuation of the Study During 1979-1980

During 1979-1980, particular emphasis will be placed on studies of graduates of the teacher preparation programs for the period 1975 through 1979. Subjects who graduated prior to 1975 will be dropped from further study as per the original design. The potential population of 1974 through 1978 graduates was 93. In addition, a sample of approximately fifty 1979 graduates will be added to the study.

Figure 2 shows an abbreviated chart for the major activities of the project during 1978-1979. This same plan will be followed during 1978-1980. Initially, three graduate assistants will engage in intensive studies of the use of the observational instruments. This will occur from approximately September 15 through October 20. Concurrent with these activities, a schedule of visitations will be developed for the 1975 through 1978 graduates that have previously participated in the study. The 93 individuals will be visited starting the later part of October, 1979. Visitation will continue until the end of January or the early part of February, 1980.

As soom as possible after the beginning of the fall quarter, a survey questionnaire will be sent to all 1979 graduates (Fall, 1978; Winter, 1979; Spring, 1979; and Summer 1979) of the teacher preparation programs of the University. At this same time the 1979 graduates will be asked to participate in the study. It is anticipated that a sample of 30 B.S. level graduates and 20 M.A. level graduates will be selected. During the early part of the winter of 1980, a schedule of visitation for these individuals will be prepared. During the late winter and spring of 1980, these individuals will be visited for purposes of observation and gathering baseline data. Particular attention will be given to a study of the graduates of the M.A. program who are in the classroom.

Beginning in the late spring and continuing through the summer of 1980, data analyses will be made and a report of the sixth year activities of the project will be prepared. It is anticipated that the report will include detailed comparisons with the results obtained in the previous years of the study. Also during the year, efforts will be made to revise and update the various questionnaires and forms used as a part of the study. It is anticipated that these revisions will result in the collection of better and more usable data.

During 1979-1980, one or more special studies will be carried out that will lend extra data to the total project. It is anticipated that a detailed study will be made of the use of the observation instruments that are completed by principals and the independent observers (graduate assistants). Also, analyses of the accumulated data will be made to explore such questions as the relationship of achievement on the National Teacher Examiniations to such variables as principals' ratings, scores from the Student evaluation of Teaching, and observations made by the independent observers.

Long Range Plans

Based on the high level of acceptance of the project by the University and the interest shown by other groups, the project will be integrated into the total operation of the teacher education program. At the present time, it is anticipated that the basic plans outlined in the first chapter of this report will be continued on an indefinite basis. The literature on teacher and program evaluation will be monitored and changes will be made in the basic instrumentation and methods of data collection as dictated by future attention will be given to the development of alternative methods of teacher evaluation and the development of systems for the evaluation data related to the programs of the University in such areas as public personnel services.

APPENDIX

REPORTS AND STUDIES RELATED TO THE TEACHER PREPARATION PROGRAMS OF TENNESSEE TECHNOLOGICAL UNIVERSITY

1. Ayers, Jerry B. Report 1-Restudy. A Survey of the Graduates of the Teacher Preparation Programs of Tennessee Technological University for the Period 1965 Through 1969, Cookeville, TN: Tennessee Technological University, College of Education, 1971. (mimeo.), 49 pp.

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3. Ayers, Jerry B. Report III-Restudy. A Report of Four Surveys of the Graduates of the Teacher Preparation Programs of Tennessee Technological University for the Period 1965 Through 1970. Cookeville, TN: Tennessee Technological University, College of Education, 1971. (mimeo.), 39 pp.

4. Ayers, Jerry B. "Predicting Quality Point Averages in Master's Degree Programs in Education," Educational and Psychological Measurement, 31:491-95, 1971.

5. Ayers, Jerry B. A Survey of Student Teachers at Tennessee Technological University. Cookeville, TN: Tennessee Technological University, College of Education, 1971. (mimeo.), 7 pp.

6. Ayers, Jerry B. Report V-Restudy. A Report of Two Surveys of the 1971 Graduates of the Teacher Preparation Programs of Tennessee Technological University. Cookeville, TN: Tennessee Technological University, College of Education, 1972. (mimeo.), 28 pp.

7. Ayers, Jerry B. and Michael E. Rohr. "Prediction of Quality Point Averages from Personality Variables," Educational and Psychological Measurement, 32:491-94, 1972.

8. Dotson, James R. and Jerry B. Ayers. "A Systematic Plan for the Restudy of a Teacher Education Program," The Tennessee Tech Journal, 7:85-89, 1972.

9. Ayers, Jerry B. and Michael E. Rohr. "The Relationship of Student Grade Expectations, Selected Characteristics, and Academic Performance for Education, Engineering, and Business Majors," Presented before the American Educational Research Association, April, 1972, Chicago, IL.

10. Brimm, Jack L. and Jerry B. Ayers. "Attitudes of Students Toward Education and Liberal Arts Courses," Presented before the Mid-South Educational Research Association Meeting, November, 1973, Memphis, TN.

11. Ayers, Jerry B. Report VI-Restudy. A Report of Three Surveys of the 1972 Graduates of the Teacher Preparation Programs of Tennessee Technological University. Cookeville, TN: Tennessee Technological University, College of Education, 1973. (mimeo.), 38 pp.

12. Ayers, Jerry B., Florinda A. Bustamante, and Philip J. Campana. "Prediction of Success in College Foreign Language Courses," Educational and Psychological Measurement, 33:939-42, 1973.

13. Rohr, Michael E. and Jerry B. Ayers. "Relationship of Student Grade Expectations, Selected Characteristics, and Academic Performance," The Journal of Experimental Education, 41:58-62, 1973.

14. Ayers, Jerry B. Report 74-1. A Report of Three Surveys of the 1973 Graduates of the Teacher Preparation Programs of Tennessee Technological University. Cookeville, TN: Tennessee Technological University, College of Education, 1974. (mimeo.), 34 pp.

15. Riddle, Barbara Ann. Report 74-2. An Evaluation of the Graduate Program in Health and Physical Education at Tennessee Technological University By a Follow-up Study of the Graduates. Cookeville, TN: Tennessee Technological University, College of Education, 1974. (mimeo.) 119 pp.

16. Ayers, Jerry B. and Robert E. DuBey. "Student Teachers Attitudes Towards Supervising Teachers," The Educational Catalyst, 4:17-22, 1974.

17. Ayers, Jerry B. and Michael E. Rohr. "Relationship of Selected Variables and Success in a Teacher Preparation Program," Educational and Psychological Measurement, 34(4):933-37, Winter, 1974.

18. Ayers, Jerry B. Report 74-3. Study of the Graduates of the Library Science Program of Tennessee Technological University 1969-73. Cookeville, TN: Tennessee Technological University, College of Education, 1974. (mimeo.), 28 pp.

19. Bilbrey, Leroy. Human Relations Skills and Teacher Effectiveness. Unpublished M.A. Thesis, College of Education, Tennessee Technological University, 1974.

20. Ayers, Jerry B. Report 74-4. Tennessee Technological University Teacher Evaluation Model. Cookeville, TN: Tennessee Technological University, College of Education, 1974, (mimeo.), 92 pp. ERIC No. 095 169.

21. Duncan, Barbara Louise. Report 74-5. Study of the Graduates of the Counselor Education Program of Tennessee Technological University. Cookeville, TN: Tennessee Technological University, College of Education, 1974, (mimeo.), 33 pp.

22. Ayers, Jerry B. Report 74-6. Study of the Use of the Graduate Record Examination. Cookeville, TN: Tennessee Technological University, College of Education, 1974. (mimeo.), 10 pp.

23. Ayers, Jerry B. Report 74-7. Study of the Graduates of the Ed.S. Programs of Tennessee Technological University for the Period 1971 Through 1974. Cookeville, TN: Tennessee Technological University, College of Education, 1974. (mimeo.), 17 pp.

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25. Perry, Don M. Report 75-2. Investigation of the Relationships Between Authoritarianism of Principals and Their Ratings of Teachers. Unpublished Ed.S. Problem Paper. Cookeville, TN: Tennessee Technological University, College of Education, 1975. 18 pp.

26. Cassetty, Mary J. G. Report 73-3. A Followup Study of the Master's and Educational Specialist's Degree Recipients in Administration and Supervision at Tennessee Technological University. Unpublished Ed.S. Problem Paper. Cookeville, TN: Tennessee Technological University, College of Education, 1975. 64 pp.

27. Ayers, Jerry B. Report 75-4. Tennessee Technological University Teacher Evaluation Model-Year II. Cookeville, TN: Tennessee Technological University, College of Education, 1975. (mimeo.), 61 pp. ERIC No. 123 210.

28. Ayers, Jerry B. Report 75-5. Application of Tennessee Technological University Teacher Evaluation Model in Methods Classes in the College of Education. Cookeville, TN: Tennessee Technological University, College of Education, 1975. (mimeo.), 26 pp.

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33. Cassetty, Mary Jane Gore and Jerry B. Ayers. "Performance of Principals as Evaluated by Themselves, Superintendents, and Teachers," The Tech Journal, 11(1):67-80, 1976.

34. Ayers, Jerry B. Report 76-1. Tennessee Technological University Teacher Evaluation Model-Year III, Cookeville, TN: Tennessee Technological University, College of Education, 1976. (mimeo.), 78 pp. ERIC No. 126 085.

35. Ayers, Jerry B. "Followup Studies at Tennessee Technological University," Published in Forces for Molding Management and Control of Teacher Education (proceedings of the Sixth Annual Teacher Education Conference), Atlanta: Southern Regional Education Board, 1976, pp. 7-13, ERIC Document No. 152 695.

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37. Ayers, Jerry B. Report 77-2. Tennessee Technological University Teacher Evaluation Model-Year IV, Cookeville, TN: Tennessee Technological University, College of Education, 1977, 100 pp. ERIC Document No. 148 778.

38. Ayers, Jerry B. Report 78-1. A Report of Three Surveys of the 1977 Graduates of the Teacher Preparation Programs of Tennessee Technological University, Cookeville, TN: Tennessee Technological University, College of Education, 1978, (mimeo.), 20 pp.

39. Ayers, Jerry B. Report 78-2. Tennessee Technological University Teacher Evaluation Model-Year V, Cookeville, TN: Tennessee Technological University, College of Education, 1978, 54 pp. ERIC Document No. 167 487.

40. Ayers, Jerry B. Report 79-1. A Report of Three Surveys of the 1978 Graduates of the Teacher Preparation Programs of Tennessee Technological University, Cookeville, TN: Tennessee Technological University, College of Education, 1979, (mimeo.), 21 pp.

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42. Ayers, Jerry B. "Followup Studies: Providing the Thrust for Program Improvement," Presented before the Annual Meeting of the American Educational Research Association, San Francisco, April, 1979.

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Other Reports of Interest

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48. Turck, Merton J. "A Look at Dogmatism at Tennessee Technological University," The Tennessee Tech Journal, 4:1-7, 1969.